

24 March 2020

Personalized for HBM Healthcare Investments AG, Thomas Heimann

Please vote for us <https://voting.institutionalinvestor.com/>

## HBM Healthcare Investments

Switzerland

### Other financials

#### Can Biotech cure the market?

- HBM Healthcare Investments (HBMN) is a closed-end investment fund founded in 2001 by Hoffmann-La Roche ex-CFO Henri B. Meier and partners, listed on the SIX exchange since 2008. HBM Healthcare is to date the only large healthcare-dedicated fund globally to invest in both private and public equities, a strategy validated by over 60 trade sales or IPOs since 2010.
- After an initial transition period, the strategic shift out of high-risk preclinical-stage ventures boosted returns, accelerating since 2016. Over the last three years, HBM Healthcare delivered the best returns in its sector, culminating in a 48% total return in 2019. Over the past 6 years to end-2019, the fund has generated over CHF 1bn in added value at a 14% compound annual growth rate, to reach CHF 1.5bn Net Asset Value (NAV). Over the last weeks, HBM share price lost 34% although its net asset value "only" declined by estimated 18%. For investors confident in the healthcare sector resilience and in an imminent COVID-19 therapy, we point at unaffected sector fundamentals.
- We provide an analysis of the main contributors to HBM's past performance, pointing to the often-overlooked private equity investments, which we call the "submerged part of the Iceberg". We estimate that on average about 41% of HBMN net gains over the last 8 years originated from the private equity (PE) portfolio, and expect its positive contribution, disproportionately discounted by the market, to continue in the future.
- We expect the biotech sector to recover from the COVID-19 impact within the summer on positive anti-viral drug development (we eagerly await Regeneron's VelociMab results) and thereafter point to the uplift potential from the upcoming IPO of Cathay Industrial Biotech, which we estimate at CHF 8 to 12 per share, and longer-term CHF 9 per share from the remaining part of the PE portfolio. We value HBM Healthcare at CHF 1,538mn and initiate our coverage with a Buy recommendation and a target price at CHF 221 per share.

### Buy (Initiation of Coverage)

Closing price as of 23-Mar-20	CHF 154.20
High/Low (12M)	253.50/154.20
<b>Target price (prev. CHF -)</b>	<b>CHF 221.00</b>
Upside to target price (%)	43.3
Expected dividend yield (%)	4.9
Total return potential (%)	48.2
Risk category	2

Reuters/Bloomberg	HBMN.S/HBMN SE
Avg. daily turnover (CHF mn)	3.50
Free float (%)	83.0
Market cap. (CHF mn)	1,073
No. of shares issued (mn)	7.0

#### Events

Annual general meeting	Jun-2020
4Q	08-May-2020
Shareholders	Nogra Pharma Invest 15-20%

### Price relative to Index



Performance (%)	1M	3M	6M
Absolute	-37.8	-29.9	-21.2
rel. SPI	-12.4	-7.0	-3.5
rel. STOXX Europe 600	-3.3	3.0	6.9
rel. SXXP Financial SVS	3.4	6.7	9.8

**Analyst: Bruno Bulic, Ph.D.**  
+41 43 388 9225  
bbulic@helvea.com

	2018/19	2019/20E	2020/21E	2021/22E	2022/23E
EBITDA (CHF mn)	211.5	44.5	228.9	137.8	164.8
EBIT reported (CHF mn)	211.5	44.5	228.9	137.8	164.8
EBIT adjusted (CHF mn)	211.5	44.5	228.9	137.8	164.8
Net income (CHF mn)	209.1	42.2	226.6	135.5	162.5
EPS reported (CHF)	30.05	6.07	32.58	19.47	23.36
EPS adjusted (CHF)	30.05	6.07	32.58	19.47	23.36
DPS (CHF)	7.50	8.46	9.55	9.99	0.00
Dividend yield (%)	4.6	5.5	6.2	6.5	0.0
P/E adjusted (x)	5.5	25.4	4.7	7.9	6.6
P/BV (x)	0.9	0.8	0.7	0.7	0.7
EV/EBITDA (x)	5.8	26.3	5.1	8.5	7.1
EV/EBIT (x)	5.8	26.3	5.1	8.5	7.1
Net debt/EBITDA (x)	0.5	2.2	0.4	0.7	0.6

Source: Company data, Baader Helvea Equity Research

## CONTENTS

<b>INVESTMENT CASE SUMMARY</b>	<b>3</b>
<b>HBM INVESTMENT PROCESS</b>	<b>7</b>
HBM Board of Directors	10
Management HBM Healthcare Investments Zug/Cayman	10
SWOT analysis	11
<b>PERFORMANCE VERSUS HEALTHCARE BENCHMARKS</b>	<b>12</b>
<b>PERFORMANCE VERSUS PEERS</b>	<b>14</b>
HBM share price versus net asset value	16
<b>PUBLIC EQUITIES SECTOR OUTLOOK FOR 2020</b>	<b>17</b>
HBM private equities	18
<b>RESPECTIVE CONTRIBUTIONS TO NET ASSET VALUE EVOLUTION</b>	<b>22</b>
<b>PERFORMANCE OF THE PUBLIC EQUITIES PORTFOLIO</b>	<b>23</b>
<b>FORECAST ON PUBLIC EQUITIES ASSET VALUE EVOLUTION</b>	<b>26</b>
<b>CATHAY INDUSTRIAL BIOTECHNOLOGY</b>	<b>31</b>
Chinese IPO and VC scene	35
Funds	36
<b>VALUATION</b>	<b>38</b>
<b>KEY DATA</b>	<b>39</b>

**HBM Healthcare Investments** Please vote for us <https://voting.institutionalinvestor.com/>

## INVESTMENT CASE SUMMARY

- HBM Healthcare Investments (HBMN) is a closed-end Swiss investment company founded in 2001 by Hoffmann-La Roche ex-CFO Henri B Meier and partners and successfully introduced on the Swiss public market in 2008. The fund is focused on the healthcare sector in a broad sense, with a diversified portfolio including, next to traditional biotech and pharma names, also MedTech companies and healthcare service providers (IT health technologies, drug distribution networks). Over the past six years to end-2019, the fund has generated over CHF 1bn in added value at a 14% compound annual growth rate, to reach CHF 1.5bn Net Asset Value (NAV), all the while distributing CHF 207mn in tax-exempt dividends and aggregated CHF 187mn share buybacks.
- HBM Healthcare is to date the only large healthcare-dedicated fund globally to invest in both private and public equities, a strategy validated by over 60 trade sales or IPOs since 2001. The contribution of the private equities portfolio on HBMN performance is important; accounting for an estimated 41% of HBMN net gains over the last 8 years. Achieved exit multiples appear particularly attractive, reaching in average 130% return on investment.
- We thus see a very significant upside potential from private equities assets, the “submerged part of the iceberg” accounting for 30% of HBMN assets as of end-February 2020. Noteworthy, HBM conservatively reports the private positions at investment costs.
- We thus provide an analysis reflecting a successful private equities portfolio turnover based on historical exit multiples and a detailed analysis on the near-term impact of the upcoming Cathay Biotech IPO, accounting on its own for an estimated CHF 8-12 per share uplift.
- HBM's track record is one of the best in its sector. Over the last 10 years, HBMN shares total return reached 19.7% per annum (incl. distributions, reinvested in security), well above HBMN mid-term targets for total shareholder return of 10-15% per annum. Looking at more recent shares total return, over 2017-2019 HBM outperformed peers consistently, boasting a 48% total return in 2019, only challenged by the UK-based Biotech Growth Trust (BIOG), which however ranked sector worst the year before. The favorable underlying biotech market dynamics clearly supported the gains recorded by most sector funds over 2019, with the Nasdaq Biotech Index gaining 25% in 2019, and the MSCI World Healthcare +23.9%. As in the previous years, HBM outperformed major biotech/healthcare indices by a wide margin, demonstrating, in our view, the efficiency of the private/public equities tandem.

### HBM share total return versus peers (including distributions)

%	2017	2018	2019	YTD*
HBM	40.5	21.8	48.0*	-25
Biotech Growth Trust	12.1	-19.9	48.5	-18
Worldwide Healthcare Trust	20.7	-4.9	32.3	-24
Tekla Healthcare Investors	16	-13.1	26.8	-2
BlackRock Health Sciences	23.1	6.3	24.0	-19
Tekla Healthcare Opportunities	21.9	3.5	22.7	-35
Polar Capital Global	6.3	-0.5	19.2	-35
BB Biotech	22.9	-5.2	18.5	-20
IBT	18.3	-2.5	13.7	-19
MSCI World Healthcare Index	20.4	3.0	23.9	-18
NBI index	21.7	-8.9	25.0	-16

\* January 2020 to date

Please note HBM fiscal year ending March 2020. Reported annual performances over January to December.

Source: Company data, Bloomberg, Baader Helvea Equity Research

## HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- Since mid-February, HBM shares declined 34% (-25% since January), however its net asset value declined only 18% (-15% year to date), due to the shielding effect of its private equities portfolio and HBM hedging strategy. HBM indeed increased its market hedge at up to 18% of the exposure to public markets over the course of the 2019 market rally.
- Despite the COVID-19 crisis, we see the sector fundamentals largely intact. We expect the health emergency to durably overshadow the discussions on drug pricing and healthcare costs, as many biotech companies continue to bring groundbreaking therapies to the market, further generating unmatched returns on investments for shareholders.
- We see two potential scenario regarding the evolution of the COVID-19 outbreak, both resulting in a reboot of the economic activities within the next 6-8 weeks and a gradual normalization over 2H20:
  1. Successful containment of the virus outbreak due to population confinement followed by large scale vaccination. We see this scenario as rather unlikely, due to tardive health authorities' responses in Western Europe and the U.S. and the long virus incubation period (14 days).
  2. Most likely, ineffective outbreak control, health authorities' resignation followed by a guided return to economic activities, should the mortality in the working-age population come below 0.5%. We see this eventuality likely mitigated by the approaching summer season and vaccine advancement. On the drug therapy side, we see Regeneron VelociMab-based antibodies cocktail most able to catalyze a market recovery during summer 2020E.
- While some sectors might stay durably affected by the COVID-19 crisis, we see the biotech sector only impacted by the upcoming financing bottleneck, and therefore prefer companies with a strong balance sheet and cash runway into late 2021. We also expect the sector M&A activities to resume in 2H20, prompted by below historical average valuations, catalyzing a sector rally thereafter.
- HBM's portfolio is predominantly focused on small- and mid-cap companies with a market capitalization below CHF 2bn (65% of public equities). Historically, those companies tend to outperform large cap ones, which typically suffer from declining R&D outputs. On the other hand, most biotech companies often only have one or two projects in development, leading to write-offs should the company fail to deliver on expectations. While the risk profile of mid- and small-cap companies is therefore high, HBM relies on two key elements to mitigate those risks: **1)** a team of experienced professionals able to assess clinical development risks and **2)** an "anchor-like" private equities portfolio, where HBM can claim Board presence.
- The key characteristics of HBM Healthcare investments are summarized below. As of end-2019, the fund disclosed a net asset value at CHF 1,532mn, with CHF 1,692mn assets, of which CHF 6.5mn cash and cash equivalents and CHF 1,686mn non-current assets which corresponds to the net asset value of its subsidiary HBM Healthcare Investments. At the group level, liabilities amount CHF 161mn, of which CHF 99,5mn from two straight CHF 50mn bonds (2.22% and 2.67% interest rates) maturing on 10 July 2021 and 10 July 2023. HBM gross gearing is thus at 10% end-December 2019E.
- HBM is able to cover its liabilities without affecting its investments, due to CHF 267 cash and cash equivalents (15% of assets end-2019, increased to 19% end-February 2020) within its subsidiary HBM Healthcare Investment (Cayman). End-2019, the subsidiary also reported CHF 151mn liabilities, of which CHF 108mn hedging in SPDR S&P Biotech ETF and CHF 41mn performance fee liability for 2019 (We however estimate that the COVID-19 impact will wipe-out that previously expected performance fee for the current fiscal year), resulting in an estimated CHF 115.5mn net cash end-2019.
- Investments are mostly denominated in USD (71%), followed by Chinese yuan (11%) due to the high exposure to the white biotech company Cathay Industrial Biotechnology. Euro-denominated investments accounted for 9% of the total investments. Compared to peers, which predominantly invest in US-based companies, HBM appears well diversified currency-wise.

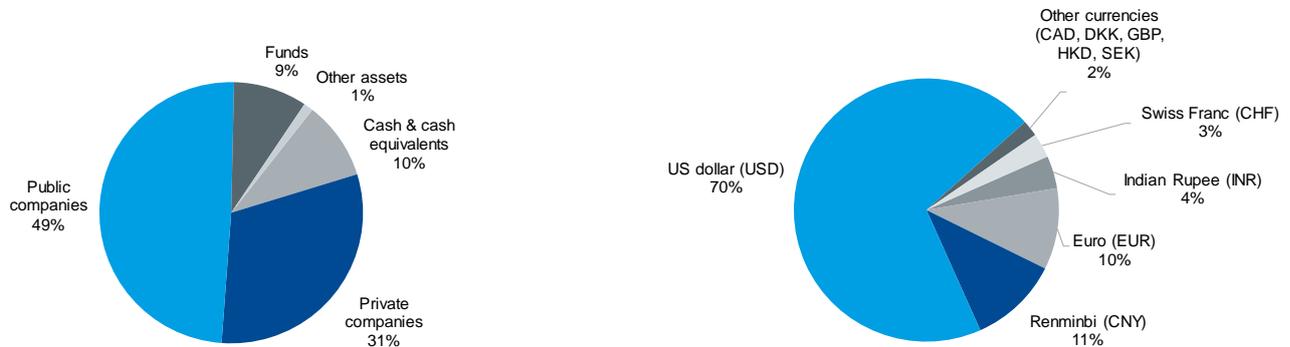
HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

HBM KEY PORTFOLIO CHARACTERISTICS (31 JANUARY 2020)

Allocation of assets (HBM Healthcare Investment subsidiary)

Currency allocation of assets

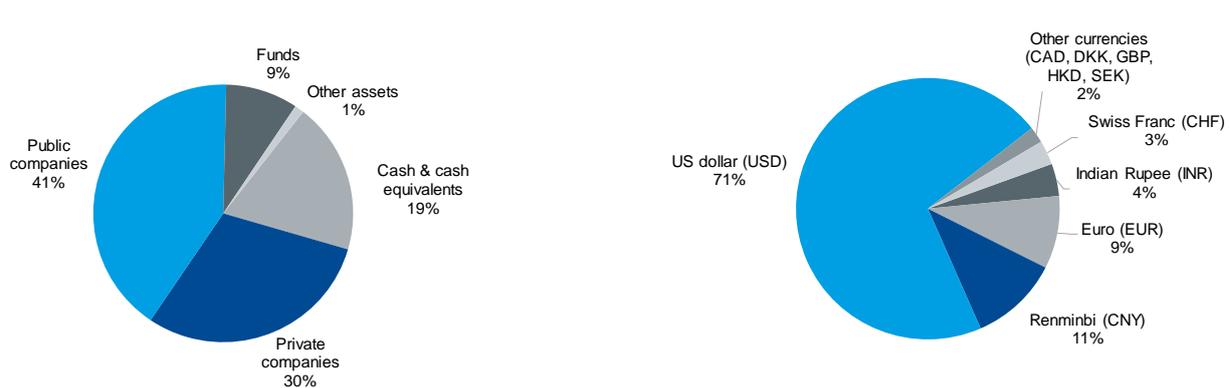


Source: Company data, Baader Helvea Equity Research

HBM KEY PORTFOLIO CHARACTERISTICS (28 FEBRUARY 2020)

Allocation of assets (HBM Healthcare Investment subsidiary)

Currency allocation of assets



Source: Company data, Baader Helvea Equity Research

- Biotechnologies have always been, for some reason, a US affair. While fundamental research in Europe stays strong, the transition of new drugs from bench to bedside requires a significant risk-taking attitude. For that reason, a large part of healthcare companies based in Europe also opt for a US listing, further reducing the number of EUR-denominated companies. For a European investment company, it is therefore challenging to mitigate exposure to the USD and the potential regulatory changes that might appear in the U.S. in the future. HBM however manages to reduce exposure to the USD to 71%, largely because of investments in Asia and emerging countries.
- Investment in Chinese Yuan account for 11% of investments, largely due to its large position in Shanghai Cathay R&D. HBM's exposure to the Swiss franc is limited to 3% with investments in Idorsia (CHF 12.3mn) and participations in investment funds BioMedInvest I & II with CHF 5.2mn and CHF 6.2mn, respectively.
- The currency exposure however does not accurately depict HBM's geographic diversification. HBM's underlying exposure to the U.S. was actually reported at 59% end-2019, while Asia captured the second rank with 25% of total investments, ahead of Europe (16%). This relatively high exposure to Asia is also due to HBM's participation in India- and China-based investment funds, which accounted for 9% of assets end-2019 as a strategic access to local or international private equity deals.

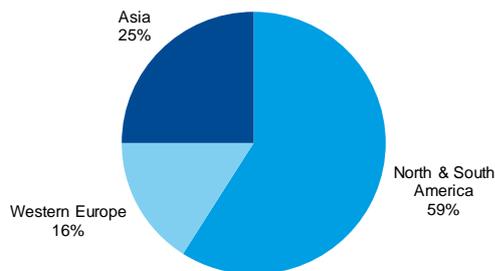
**HBM Healthcare Investments**

Please vote for us <https://voting.institutionalinvestor.com/>

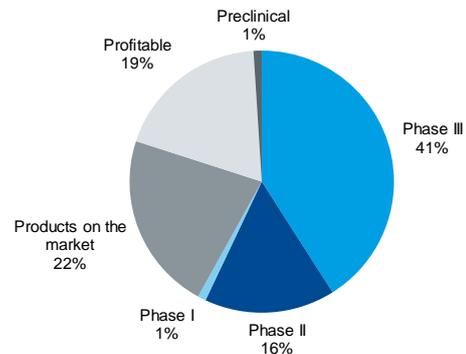
- Investments labeled in Indian rupee amount to 4%, mostly on the private equity side. In addition, HBM reported end-2019 a CHF 8.7mn participation in the India-based Tata Capital HBM fund, which is however denominated in USD. We see HBM's geographic diversification standing out from peers, which are predominantly focused on North America, which can be seen as another factor of stability.
- To mitigate the typical product development risk, HBM gradually decreased its exposure to preclinical assets, now predominantly focusing on Phase III products (41% of investments) and phase II assets (16% of investments). Companies with a product on the market account for 41% of investments, a proportion expected to further increase in 2020 due to numerous Phase III companies expecting marketing authorizations in 2020E. We thus see the investments positioned in two main categories, according to growth profiles, i.e. high-risk/high-growth innovators, and low-risk/low-growth "cash-cows". As further described below, accurate risk mitigation stays key to HBM's investment process, and relies on a complex decision-making structure, and when necessary is further backed by financial hedging.

**HBM KEY PORTFOLIO CHARACTERISTICS (DECEMBER 2019)**

Currency allocation of assets



Development phase of portfolio companies

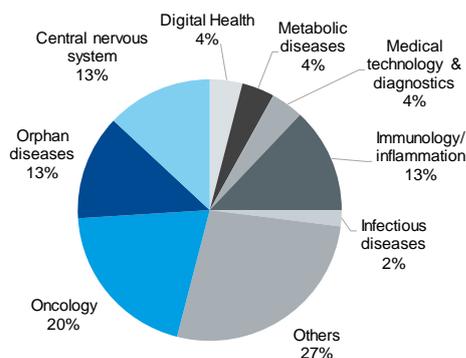


Source: Company data, Bloomberg, Baader Helvea Equity Research

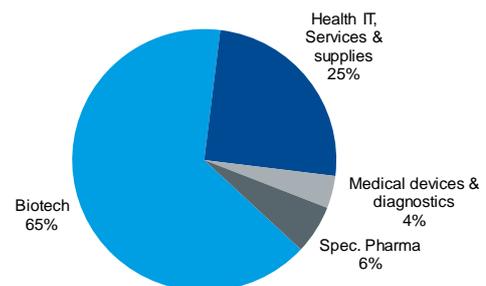
- Last but not least, investments according to therapeutic indications are also well-diversified, but predominantly focused on drug development. Unsurprisingly, oncology stays an attractive indication due to high unmet medical need, and accounts for 20% of HBM's investments. We note a high exposure to high-risk/high-reward central nervous system indications (13% of investments) as well as diversification into other promising sectors such as medical technologies/equipment (4% of investments) and digital health (4% of investments).

**HBM KEY PORTFOLIO CHARACTERISTICS (DECEMBER 2019)**

Investments repartition according to therapeutic indications



Investment sectors breakdown

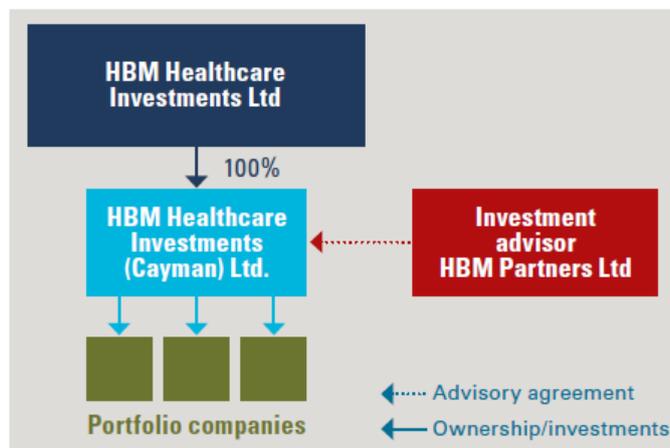


Source: Company data, Bloomberg, Baader Helvea Equity Research

## HBM INVESTMENT PROCESS

- HBM's stock picking process relies on a network of experienced professionals. HBM partners based in Zug, Switzerland, provides technical support to HBM Healthcare Investments (Cayman), a 100% subsidiary of HBM Healthcare Investments Group. At the core of the investing process into both private and public companies in the healthcare sector, HBM prioritizes due diligence and strategy, guided by highly skilled professionals. On average, HBM Partners team members have over 15 years of experience in the sector, while HBM Healthcare board members and managers are typically industry veterans.

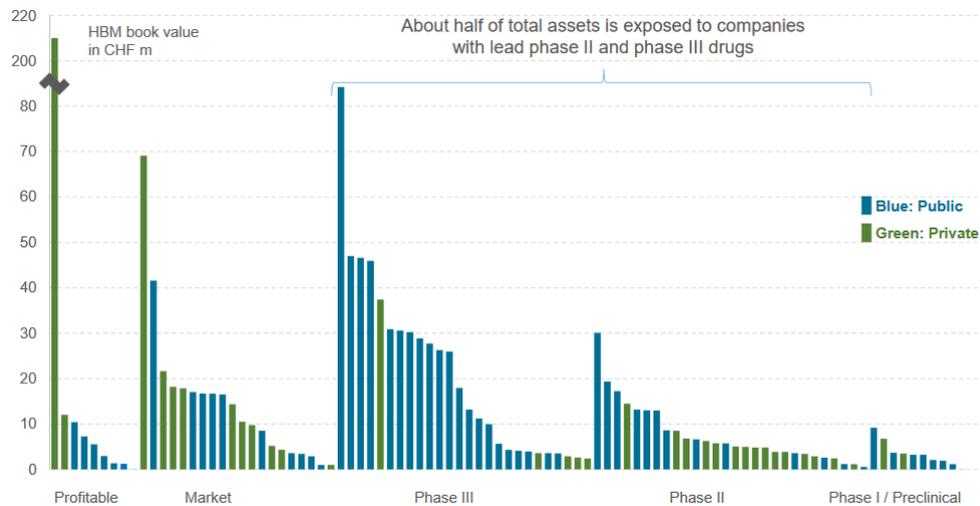
### HBM Group structure



Source: Company data

- HBM Partners identifies and evaluates potential investment targets, including due diligence and contractual negotiations, as well as portfolio monitoring and assessment of potential exit strategies. The investment decision process differs according to investment targets. For private equities, sourcing mostly relies on a network of entrepreneurs, consultants and other investors. For both private and public equities, HBM Partners generally takes a bottom-up approach, screening companies with long-term growth potential. Due diligence typically consists of scientific and clinical review, business analysis and assessment of financial and intellectual property positions.
- For private companies, the maximum single position limit at time of investment is set at 10% of HBM's asset value, and typically HBM will seek to obtain a Board representation to actively participate in the company development. At- or post-IPO, HBM might continue to hold positions but typically exits within 3-4 years, generally when companies enter a mature low-growth phase, in order to reallocate resources to private or public companies. The investment into private equities is particularly "capital intensive", with regular follow-on rounds required to grow the activity, a characteristic which also poses high entry barriers into the business and thus benefits HBM.
- On average, out of 700 private equity investment proposals evaluated each year, only 25 pass the initial due diligence screening, leading to eventually 8 to 12 deals per year. A high percentage of companies present themselves at very early development stages, before proof of concept. While valuations of those companies is often very attractive, it also comes associated with a very high development failure risk, an aspect highly prioritized at HBM. Currently, investments in pre-clinical stage companies account for less than 1% of HBM assets, as new applications are typically rejected following due diligence. However up until 2012/13, HBM's exposure to such companies has been significantly higher, partly explaining the moderate fund performance versus healthcare benchmarks in those early days.

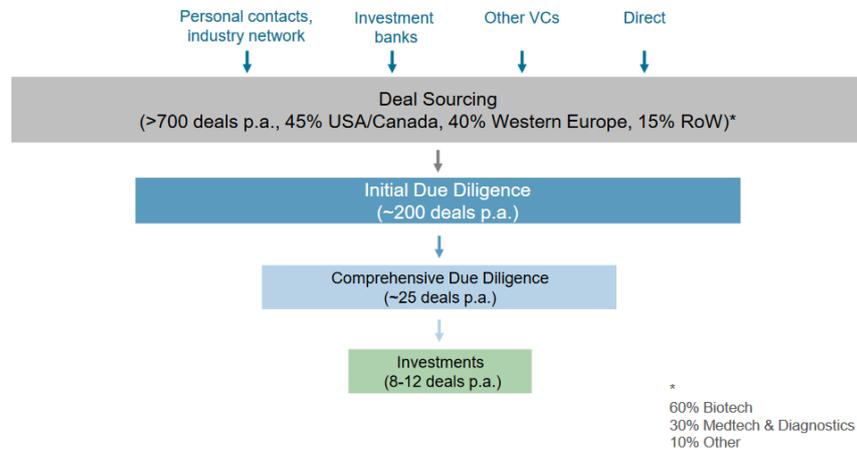
HBM investments according to development stage (end-2019)



Source: Company data

- End-2019, HBM disclosed investments into 31 private companies, for an aggregate value at CHF 521.3mn (29% of assets). Shanghai Cathay was clearly the largest position, accounting for CHF 205.5mn (39% of private equities investments), while other investments typically stay in the CHF 5-15mn range. HBM indeed restricts exposure to new investments to a maximum of 10% of NAV. The investment in Cathay followed that rule at the time of investment back in 2006, however the position has significantly appreciated in the meantime. HBM reported a total investment at CNY 281.9mn into Cathay (CHF 39.4mn at current exchange rate), translating in a 5.2x return on investment to date. As further detailed below, we expect the position value to further appreciate in 2020, as Cathay filed for IPO on Shanghai's Star Market end-2019 and assuming a market recovery in China by end-2020E.
- We see the 10% limit policy protective for HBM shareholders, with most private equity companies being in a growth phase and thus requiring capital injections in order to execute on development plans. Should a follow-on round fail, typically because of main shareholders reluctance or inability to deploy additional capital, or to attract new investors, the book value of private companies can be significantly eroded or, in the worst case, entirely written off. In such situation, portfolio overweight can have a significant impact on the fund net asset value.
- Due to its investments in public equities, HBM has the ability and flexibility to harvest cash to reinvest in PEs, thus fueling a virtuous investment cycle. Over the last years, HBM participations in follow-on rounds has been relatively modest considering the size of the fund, with an estimated CHF 28mn invested in FY18 and CHF 38mn year to date. Nevertheless, such level of investment might cause difficulties for smaller pure-play private equities investment funds, which would then engage in fundraising. We believe the entry barrier in the activity at a net asset value above CHF 500mn and NAV growth rates above 15% to be able to both keep sufficient cash position on balance sheet and replenish invested capital.
- In terms of ownership in private companies, and thus a potential "commitment" to participate in follow-on rounds, we note only 5 sensitive positions among the 31 disclosed end-December 2019. Among those, HBM holds 70.2% of Farmalatam (Panama-based, digital health), 29.0% of Swixx BioPharma (Swiss-based, pharma distribution), 25.2% of Westmed Holding (US-based, Medical equipment), 19.9% of connectRN (US-based, digital solutions/healthcare) and 14.6% of Neurelis (US-based, biotech). After the upcoming IPO of Cathay Biotech (7.9% ownership into the company), we see Neurelis being the most likely to require a double-digit USD million cash injection to develop the business, however with now a first drug approved in the U.S. by the FDA (January 2020), we believe the company well-suited for an IPO in 2020-21E.

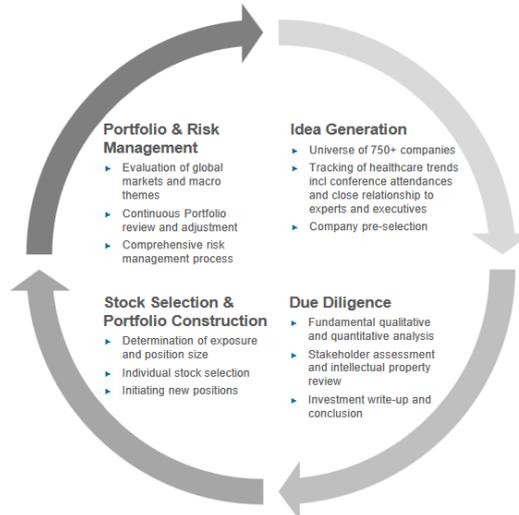
HBM private equities investment process (2019)



Source: Company data

- The investment process into public equities follows a comparable path, but starts at a different point. The investment universe consists of over 750 listed companies, with, in contrast to private equities, no or limited participation barriers. Due diligence remains the cornerstone of the investment process, and is facilitated by mandatory financials reporting. Here also, HBM can rely on an experienced team of 6 analysts, supplemented by an access to a network of key opinion leaders if required.

Public equities investment process (2019)



Source: Company data

- End-2019, HBM disclosed investments in 49 public companies, for an aggregate value of CHF 820.7mn (46% of assets). A significant part of the public equities is formed by ex-private companies, granting continuity into companies' business development. End-2019, four of the top ten public equity positions are ex-private investments (Y-mAbs Therapeutics, SpringWorks Therapeutics, Viela Bio, Turning Point Therapeutics). This subgroup accounted for nearly 29% of HBM public equities total value end-2019.

**HBM Healthcare Investments** Please vote for us <https://voting.institutionalinvestor.com/>

## HBM Board of Directors

- The HBM Board is formed by six directors, elected by an absolute majority of votes cast at the ordinary shareholders meeting. The Board's expertise cover the following subjects:
  - Mario G. Giuliani (2012): Member of the Compensation Committee. Member of the Board of Directors Jukka LLC since 2015, NGR (MONACO) SAM since 2015, Giuliani Group SpA since 2010, and Giuliani SpA since 1999; Member of the Investment Committee Royalty Pharma since 2001, and Mosaic Ventures LLP since 2000 as well as various other directorships within the Nogra Group. Previously executive positions and directorships at Giuliani SpA , Recordati SpA , and Nogra Group SA.
  - Hans Peter Hasler (Chairman, first elected in 2009): Sector and marketing strategies, market approval (FDA). Hans Peter Hasler is Chairman of the Board of Directors MIAC AG since 2012. Member of the Board of Directors Minerva Neurosciences since 2017, member of the Board of Directors Shield Therapeutics plc since 2018. Since 2017 CEO of Vicarius Pharma. Prior to this, international management positions at Wyeth Pharmaceuticals, Biogen and Biogen Idec, as well as Elan Corporation.
  - Dr. Eduard E. Holdener (2008): Research and development. Dr. Eduard E. Holdener is Chairman of the Board of Directors NovImmune S.A. since 2008, CEO since 2016 Medical doctor. Prior to this, specialist in internal medicine and oncology; various international executive positions at F. Hoffmann-La Roche.
  - Robert Ingram (2006). Sector and marketing strategies, market approval. Member of the Compensation and Nominating Committee. Chairman of the Board of Directors Viamet Pharmaceuticals Inc. since 2015, BioCryst Pharmaceuticals Inc. since 2015, Novan Inc. since 2011, and Cree Inc. since 2008. General Partner of Hatteras Venture Partners USA.
  - Dr. Rudolf Lanz (2003): Finance, M&A transactions, audit. Dr. Rudolf Lanz is Chairman of the Board of Directors Dr. Rudolf Lanz AG since 2009; Member of the Board of Directors MIAC AG since 2015, and Pearls Fashion Holding AG since 2009. Previously Partner of The Corporate Finance Group and head of M&A & Corporate Finance of Ernst & Young Switzerland.
  - Prof. Heinz Riesenhuber (Vice Chairman, 2001): Management, production, audit. Prof. Heinz Riesenhuber is Chairman of the Advisory Board Rock Tech Lithium Inc. since 2018; Member of the Investors' Committee Heidelberg Innovation BioScience Venture II GmbH since 2001. Member of the German Parliament 1976 to 2017; German Federal Minister of Research 1982 to 1993; Chairman of German Parliamentary Society 2006 to 2018.

## Management HBM Healthcare Investments Zug/Cayman

- HBM Partners relies on a team of 14 investment advisors and analysts, of which eight are dedicated to private, and six to public equities. Analysts are specialists in the healthcare sector with longstanding exposure to investments, and are predominantly located in Zug, Switzerland. Expertise of the team spans across various pharma/biotech specialties, from molecular biology to pharmacology or medicine, supplemented by experts in venture capital, medical affairs and operations.
- On the private equities side, the team is directed since 2019 by Dr. Matthias Fehr, with over twenty years of experience in private and public equity investment management and research. He holds a MSc and PhD in chemistry from ETH, Zurich. Former senior sell-side analyst at Lombard Odier for biotech and medical technology industries; former scientist at the Swiss Federal Institute of Technology.
- On the public equities side, the team is directed by Dr. Ivo Staijen since 2019, with over 20 years' experience in the pharma industry and in investment analysis and portfolio management. He holds a PhD in biotechnology from ETH Zurich and MSc in chemistry from the University of Groningen. Previously senior biotechnology analyst at Bank Sarasin and department head at MDS Pharma Services.

## HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- Dr. Andreas Wicki is HBM Partners' Chief Executive Officer since 2001. He holds a doctorate in chemistry and biochemistry. Prior to this, he was chief executive of several pharmaceutical companies (1988 to 2001), investment and venture capital advisor (1993 to 2001). Member of the Board of Directors at Viela Bio since 2019, Harmony Biosciences since 2017, Vitaeris Inc. since 2016, Pacira Pharmaceuticals Inc. since 2007, and Buchler GmbH since 2000.
- Erwin Troxler is HBM Healthcare Chief Financial Officer since 2011. Economist and Swiss Certified Public Accountant. Since 2005, HBM Healthcare Investments Ltd and HBM Partners Ltd, since 2011 Chief Financial Officer. Prior to this, Auditor at PricewaterhouseCoopers Ltd (1996 to 2002) and Julius Baer Family Office Ltd (2002 to 2005), Chairman of the Swiss Association of Investment Companies (SAIC) since 2004.
- Jean-Marc LeSieur is HBM Healthcare (Cayman) Managing Director and Member of the Board of Directors since 2001. He has more than twenty years of experience in trust and corporate management and administration. Before joining HBM Healthcare Investments, he was with Vontobel Private Equity Management Ltd. Associate of the Chartered Institute of Bankers, ACIB (Trustee), a member of the Society of Trust and Estate Practitioners (STEP).

## SWOT analysis

### Strengths

- Well-established investment strategy, excellent track-record over last 5 years. Effective synergies between private and public equities.
- Experienced and highly motivated professionals with excellent track record. 23 team members with longstanding exposure to investment in the Healthcare sector. Expertise covering the whole spectrum of activities from legal advisory to molecular biology.
- Better diversified than peers in terms of in geographic and currency exposure (71% USD Feb.-2020, versus >90% at peers).
- 25% of investments exposed to high-growth emerging markets (China, India).
- Well diversified in terms of therapeutic indications (Digital health, MedTechs, biotech).
- 30% of assets invested in private equities, highly resilient to market downturns, and conservatively carried at investment cost.
- Participation in private equity funds in China and India, enabling participation into local and international (Viela Bio) deals.
- Adequate firepower (CHF 165mn cash Jan-2020) to satisfy follow-on financing on private equities (CHF 38mn 9M19). Ability to tap into public equities portfolio to meet unexpected investment commitments.
- No fundraising requirement for follow-ons, and therefore no "window-dressing" incentive (private equities carried at investment cost).
- Excellent private equities exits track record (60 trade sales and IPOs during past 10 years), average 131% gains on exits.

### Opportunities

- Excellent track record likely to further reduce the share price to NAV discount or increase the premium.
- Emerging markets might gain in importance in Healthcare along increased spending on health services.
- Cathay Industrial Biotech (40% of private equities net value) initial public offering expected to lift HBM net asset value by CHF 8-12 per share.
- Headwind linked to the discussions on drug pricing in the U.S. might abate after the COVID-19 outbreak and electoral campaign and boost healthcare public equities performance.
- M&A activities might intensify as a result of declining big pharma R&D output. Acquisition of AAA by Novartis (14.8% of HBM net assets in 2017) lifted HBM NAV by 2.5% in 2017.
- Development of novel medical concepts. HBM prioritize highly innovative therapeutic strategies.
- Private equities conservatively carried at investment cost by HBM, and largely discounted by the market.
- Difficult market valorization of private equities investments (due to limited visibility into companies' business) resulting in large discounts and thus high potential upside.

### Weaknesses

- 9% of assets locked into low-visibility investment funds in China and India
- Moderate HBMN market liquidity (average 6,347 shares/day).
- Public equities performance (excluding ex-private contributions) performance closely tracking major healthcare indices.
- HBM is a large shareholder in multiple private equities, potentially resulting in high follow-on financing requirements.
- Net assets value growing towards the CHF 2bn mark, eventually limiting flexibility and reactivity in an often illiquid small-cap healthcare sector.
- Post-Cathay IPO, private equities total assets value to decrease by 39%, potentially resulting into lower contribution to Group gains going forward.

### Threats

- Biotech financing bottlenecks in market downturn
- Clinical development risk. HBM holdings are exposed to drug development risks typical for the pharmaceutical/biotechnology industry, including regulatory marketing authorization rejection, clinical development failures and commercial competitive risks. Potential new market entrants with a superior therapeutic profile or aggressive drug price tag may impact the current company valuation.
- Talent retention risk. HBM Partners relies on a team of specialists per therapeutic sectors, exposing the company to human capital losses.
- Exposed to political and regulatory policies. In the U.S. as well as in other geographies, medical agencies (FDA, EMA) might change requirements for drug reviewing and approval. Changes in drug reimbursement policies might impact holding valuations as well.
- Closing IPO and/or M&A window during market downturns might affect HBM's ability to leverage its private equities investments.
- Share price premium/discount to NAV might worsen.

Source: Baader Helvea Equity Research

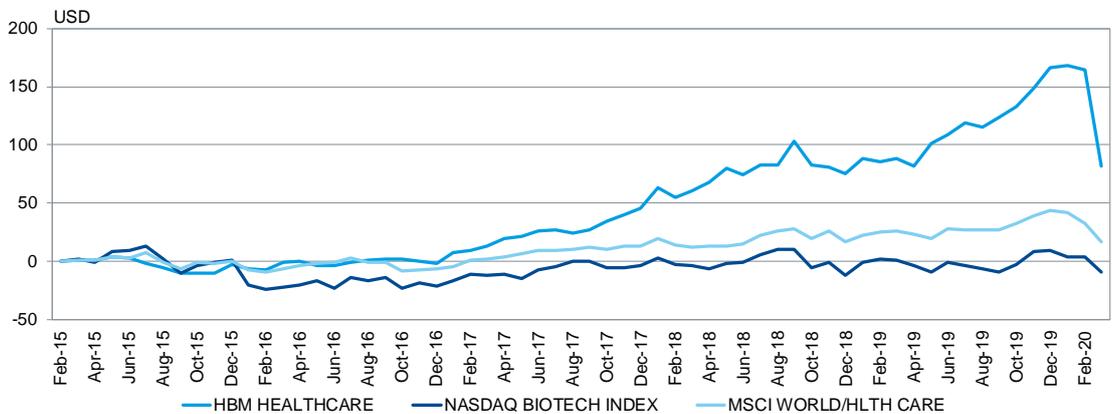
HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

PERFORMANCE VERSUS HEALTHCARE BENCHMARKS

- Over the last 5 years, HBM consistently outperformed the Nasdaq Biotech Index as well its benchmark, the MSCI World Healthcare Index. After a “maturation” period between 2008 and 2013, HBM net asset value thereafter grew at a +15.7% CAGR rate. Over the last 5 years to end-2019, the fund returned 167% in CHF (adjusted for distributions), largely outperforming the Nasdaq Biotech Index (NBI) and the MSCI World Healthcare benchmarks, which essentially evolved sideways after the “Hillary Tweets” end-2015 prompted fears that healthcare would become too costly for the US healthcare system.
- Following the COVID-19 outbreak, HBM shares came down to end-2018 levels, erasing most of the gains achieved in 2019. Since mid-February 2020, HBM shares underperformed the NBI and the MSCI world health indices, losing 34% to date versus 18% for the later. However we estimate HBM net asset value only declined by 18% since mid-February 2020, and thus present an attractive value play for investors.

BION 5-year relative performance to the Nasdaq Biotech and MSCI World Healthcare Indices

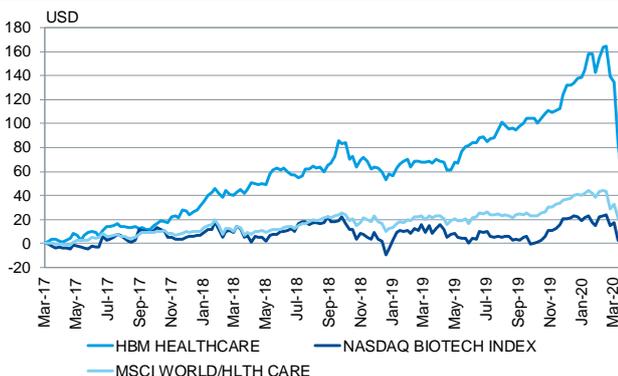


Source: Bloomberg, Baader Helvea Equity Research

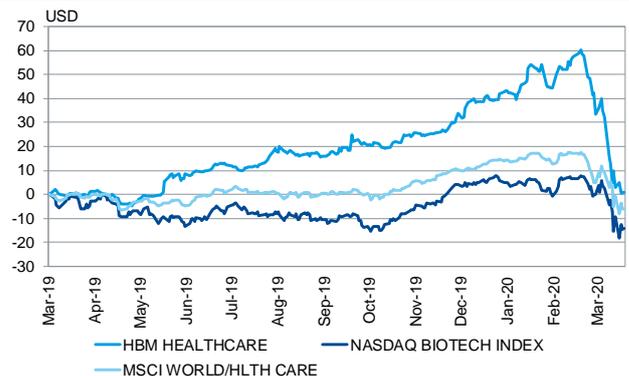
- At 1-, 3-year time points, the fund outperformed the U.S. and global healthcare indices by a wide margin. Over the last three years to end-2019, HBM total return reached +146% in CHF (+35% NBI, +52% MSCI World Healthcare). In contrast to those benchmarks, whose performance stalled during 2017 and most of 2018, HBM continued almost unaffected on its +15% per annum growth rate. As further detailed below, we see the high outperformance versus worldwide healthcare indices due in large part to the excellent performance of the private portfolio, which returned high exit multiples over the last 10 years.

HBM SHARES PERFORMANCE VERSUS NASDAQ BIOTECH INDEX PERFORMANCE

HBM 3-year relative performance to the Nasdaq Biotech Index and MSCI World Healthcare Indices



HBM 1-year relative performance to the Nasdaq Biotech Index and MSCI World Healthcare Indices



Source: Bloomberg, Baader Helvea Equity Research

## HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- Over 2019, HBM delivered a robust +48% total return in CHF (adjusted for distributions), an outperformance versus benchmarks mostly concentrated in the second half of 2019 on an invigorated biotech sector and amplified by the IPOs of Turning Point Therapeutics (estimated +2.8% positive impact on HBM NAV end-2019E) and of Spring Works (estimated +2.5% positive lift on HBM NAV end-2019E), while the revaluation of Cathay Industrial Biotech lifted HBM NAV in 2019 by USD 34mn (+2.5% in CHF). In contrast, the NBI index gained 25% over the last year, and the MSCI World Healthcare benchmark gained 23.9%, but with a high volatility after a slow start into 2019.

**HBM Healthcare Investments** Please vote for us <https://voting.institutionalinvestor.com/>

## PERFORMANCE VERSUS PEERS

- Compared to direct peers, we see HBM's investment strategy significantly differentiated with a well-established leveraging of its private equities portfolio. Originally established as a private equity fund, HBM gradually morphed into a mixed public/private equities fund, however, in our view, keeping its root in private equities. HBM ranks third globally by market cap in the healthcare sector, with a net asset value reported at CHF 1.53bn end-2019. We see the fund size providing a good balance between stability and investment agility, considering the typically moderate liquidity in the small- and mid-cap biotech sector.
- Regarding asset management fees, HBM charges 0.75% p.a. calculated on company assets, plus 0.75% p.a. calculated on company's market capitalization. A 15% performance fee is eventually collected on net asset value above the high-water mark. For the 2018/19 financial year, the net asset value per share before provision for the performance fee (the relevant figure for the calculation of the performance fee) stood at CHF 194.36. The high-water mark for the 2019/20 financial year was set at CHF 186.86 per share (194.36 minus 7.5 distributions).
- Finally, HBM introduced a 3-5% p.a. capital redistribution policy (withholding tax-exempt par value repayment) in 2012, calculated on the volume-weighted average share price for December, placing HBM in the highest yielding quartile of stocks in the Swiss SMI index. We however direct attention to the unconventional nature of dividends at investment funds, which are drawn out of net assets, and not out of the free cash flow as usually practiced. As a consequence, a decline in net asset value during market downturns would be amplified by dividend payments.

### HBM key metrics versus peers and major healthcare indices (ranked by best share total return in 2019)

Company	Bloomberg Ticker	Currency	Est.	Market cap. (USD mn)	3M avg. share/NAV discount (%)	Total holdings 2019	Div. yield 2019 (%)	Expense ratio 2018 (%)	Total return 2017 (L.C., %)	Total return 2018 (L.C., %)	Total return 2019 (L.C., %)	Perf. fees
Biotech Growth Trust	BIOG	GBP	1997	383	-6	44	0	1.2	12.1	-19.9	48.5	Yes
<b>HBM</b>	<b>HBMN</b>	<b>CHF</b>	<b>2001</b>	<b>1,580</b>	<b>+1</b>	<b>80</b>	<b>4.4</b>	<b>1.4</b>	<b>40.5</b>	<b>21.8</b>	<b>48.0</b>	<b>Yes</b>
Worldwide Healthcare Trust	WWH	GBP	1995	1,704	+3	56	0.8	1.2	20.7	-4.9	32.3	Yes
Tekla Healthcare Investors	HQH	USD	1987	882	-10	132	8.4	1.1	16	-13.1	26.8	No
BlackRock Health Sciences	BME	USD	2005	459	+2	94	5.7	1.12	23.1	6.3	24.0	No
Tekla Healthcare Opportunities	THQ	USD	2014	778	-10	73	7.1	1.5	21.9	3.5	22.7	No
Polar Capital Global	PCGH	GBP	2010	290	-8	31	0.8	1.48	6.3	-0.5	19.2	Yes
BB Biotech	BION	CHF	1993	3,675	+13	35	5	1.25	22.9	-5.2	18.5	No
IBT	IBT	GBP	1994	235	-3	90	4.3	2.07	18.3	-2.5	13.7	Yes
MSCI World Healthcare Index	MXWOHC	USD							20.4	3.0	23.9	
NBI Index	NBI	USD							21.7	-8.9	25.0	

Source: Company data, Bloomberg, Baader Helvea equity Research

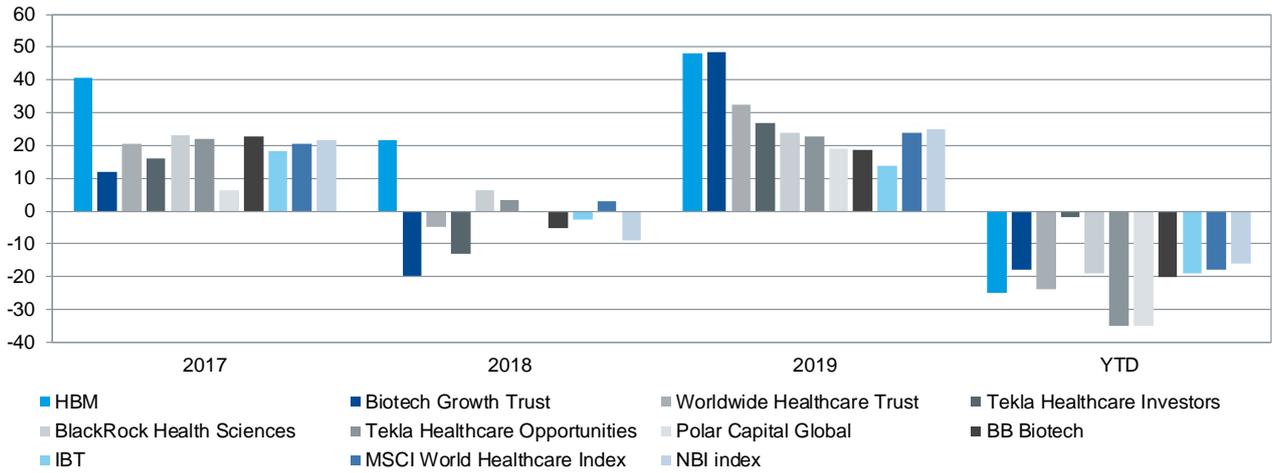
- We compiled share total returns (including distributions) among closed-end Healthcare investment funds from 2017 to end-2019. Clearly, HBM Healthcare consistently outperformed peers over that period. Looking at the total returns in 2019, HBM outperformed peers again, boasting a 48% total return, only challenged by the London-based Biotech Growth Trust (BIOG), which however ranked sector worst the year before. The favorable underlying biotech market dynamics during 2019 clearly supported the gains recorded by most sector funds, with the Nasdaq Biotech Index gaining 25% in 2019, and the MSCI World Healthcare progressing by +23.9%. However, and as in the previous years, HBM outperformed major biotech/healthcare indices by a wide margin, demonstrating, in our view, the effectiveness of the private/public equities tandem.

**HBM Healthcare Investments**

Please vote for us <https://voting.institutionalinvestor.com/>

- Year to date, and due to the COVID-19 crisis, HBM share price declined 25%, roughly in-line with sector peers, despite a moderate 15% estimated net asset value correction. This translated in a share price to NAV turning negative to currently estimated -14% (previously +7% premium, mid-February 2020). We see HBM well positioned to regain lost territory within our forecast period and leverage its private equities shield.

HBM total return versus peers and major biotech indices (%)



YTD: Year-to-date (January 2020 to date); NBI: Nasdaq Biotech Index; IBT: International Biotechnology Trust  
Source: Bloomberg, Baader Helvea Equity Research.

- A significant part of the positive HBMN return over the last years is supported by the reduction in the gap between its net asset value per share, and the price per share. Since 2009, HBMN shares have been traditionally trading at a discount to NAV, with significantly improvement since 2016, boosting share price performance over NAV gains. If we exclude this positive effect, HBM net asset value gains would still outperform peers over last three years.

**HBM Healthcare Investments**

Please vote for us <https://voting.institutionalinvestor.com/>

**HBM share price versus net asset value**

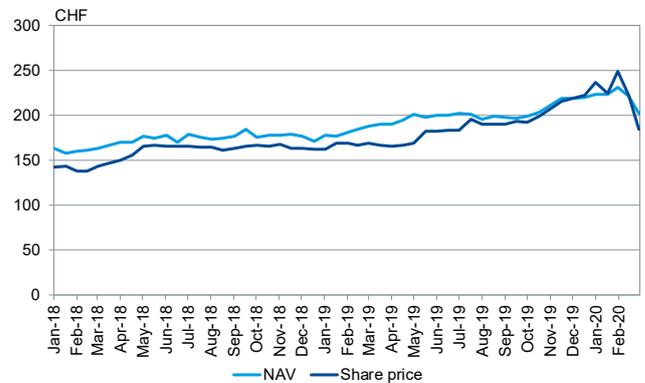
- Back in 2016, HBMN shares used to trade at a -28.3% discount to net asset value, showing the moderate investor appetite for the shares as the biotech sector corrected from its 2015 rally. During 2016, the Nasdaq Biotech Index lost 21.3% and HBM net asset value declined 7.2%.
- In the subsequent years, HBM share price-to-NAV discount gradually improved to -13.5% in 2017, -10.9% in 2018, and turned into a positive premium over early-2020 (estimated +7% mid-February 2020). The above-peers returns in 2017 (+25.8%), overexposure to Advanced Accelerator Applications in 2017 and excellent resilience in 2018 market downturn (+9.9% NAV growth, -8.9% Nasdaq Biotech Index decline) clearly attracted investors attention and installed lasting trust in HBM's growth strategy, reflected by the discount to NAV narrowing.

**HBMN SHARE PRICE AND NAV EVOLUTION**

12-years share price to NAV gap evolution



2-years share price to NAV gap evolution



NAV: Net Asset Value

Source: Company data, Bloomberg, Baader Helvea Equity Research

- We estimate that HBMN currently trades at a -14% discount to NAV. Based on HBMN's excellent recent track record, and derived from previous market downturns, we expect the premium to likely progress toward 0% within our 12-month forecasting period.

**HBM share price Premium to NAV (+) / discount (-) at year-end dates**

%	2016	2017	2018	2019	YTD
Share price Premium to NAV (+) / discount (-)	-28.2	-13.5	-10.9	1.1	-14
Share total return (%)	2.5	40.5	21.8	48	-25
NAV growth (%)	-7.2	25.8	9.9	33	-15
NBI growth (%)	-21.3	21.7	-8.9	25	-18
MSCI growth (%)	-6.32	20.4	3.04	23.9	-16

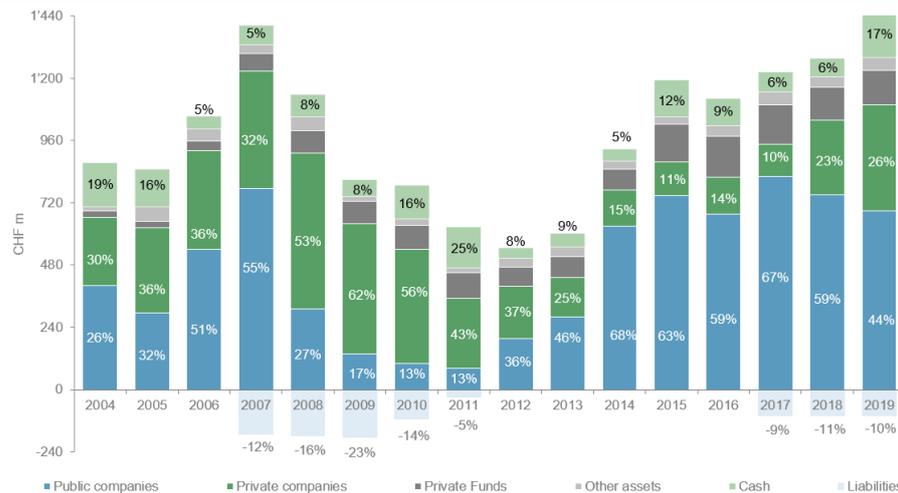
YTD: Year to date

Source: Company data, Bloomberg, Baader Helvea Equity Research

## PUBLIC EQUITIES SECTOR OUTLOOK FOR 2020

- Before the COVID-19 outbreak, we took a conservative stance for 2020, due to the pricing discussions in the U.S. Also, when tracking the NBI progression from 2016 to date, it actually only progressed by 8%. We expected those pricing discussions to persist in 2020, likely capping the biotech sector performance, which we estimated in the high single to low double-digit range.
- Looking back at the origin of the drug pricing issue, Gilead is seen as the company which opened Pandora's box back in 2015 with its Hepatitis C drug Sovaldi/Harvoni priced at USD 86,000 per treatment course, "breaking the healthcare bank" by 2016 with peak sales at staggering USD 19bn that year. Widespread criticism ensued, and discussions on "price gouging" led the US Federal Reserve Governor Janet Yellen to hint at "substantially stretched" biotech valuations, sending the NBI on a choppy ride since 2016 which persists until today.
- In the meantime, the Trump administration presented several plans to control healthcare costs, which did not prevent Gilead from introducing Yescarta at USD 373,000 per year, Spark Therapeutics from pricing Luxturna at USD 850,000, and Novartis from introducing Zolgensma at USD 2mn. The implementation of Trump's drug pricing blueprint proved indeed more difficult than expected. In July 2019, the US administration announced it would not follow on its plan to eliminate rebates on Part D drugs (prescription drugs), which was initially intended to force drug makers to adjust list prices.
- With the COVID-19 outbreak, we expect the focus in the U.S. to shift away from drug pricing, especially considering that medications only account for less than 20% of total healthcare costs in the U.S. While we expect the biotech sector to now face financing bottlenecks, this will likely result into increased M&A activities, and subsequently a sector re-rating over end-2020E.
- In addition, HBM private equities portfolio effectively shields part of its net asset value against market volatility. End-February, private equities accounted for 30% of HBM assets. HBM's exposure to private equities has gradually increased since 2013, after a strategy adjustment to avoid pre-clinical high-risk assets and focus on more mature phase II/III projects. This resulted in an improved return on investment since 2013.

HBM assets allocation evolution over time (as of end of each financial year (31 March), in % of assets)



Source: Company data

- After detailed analysis, we see the private equities not only acting as an anchor, but first and foremost driving HBM's performance. In order to identify the main contributors to HBM's historical performance, we looked separately at the performance of HBM public and private equities, including or excluding exit gains. In contrast to market view, which might perceive HBM as a traditional public equity fund with a private equity arm, we see HBM's investment concept centered on private equities, with a public equity extension primarily acting as a convenient exit door.

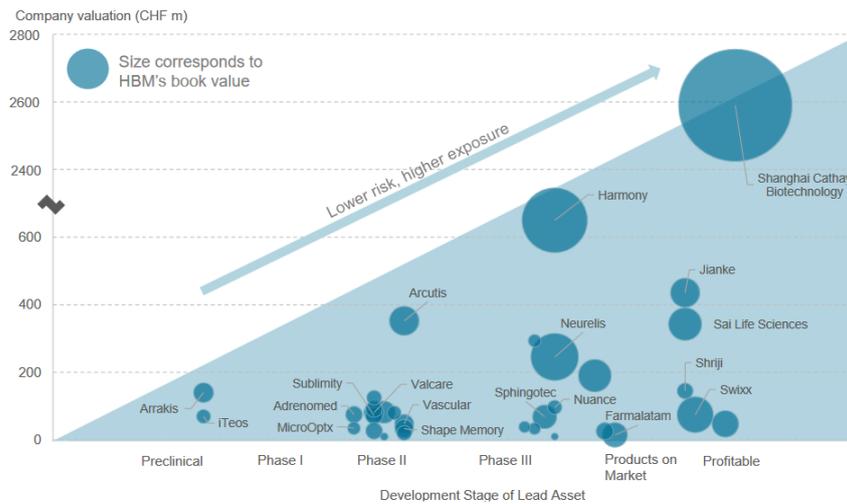
HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

HBM private equities

- Before addressing the potential upside contained in HBM private equities, we were first interested in evaluating its potential downside, a reason why the market typically discounts its upside potential. Because of the limited business transparency, we referred to the historical trends over the last 10 years, as disclosed by HBM. On average, write-downs reached 11% of the private equities total asset value since 2012, with a record high 25% in 2012/13, followed by rapidly improving figures since then, likely because of the strategic reorientation on less risky phase II/III assets. Write-downs in 2018/19 and in 2019E reached 2.4% and 3.9% in total value, respectively.

HBM private equities profile (end-2019)

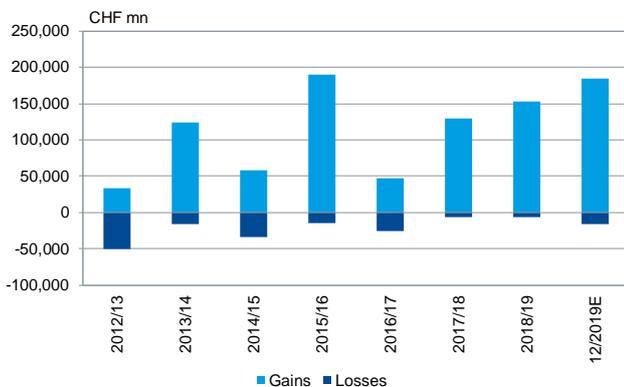


Source: Company data

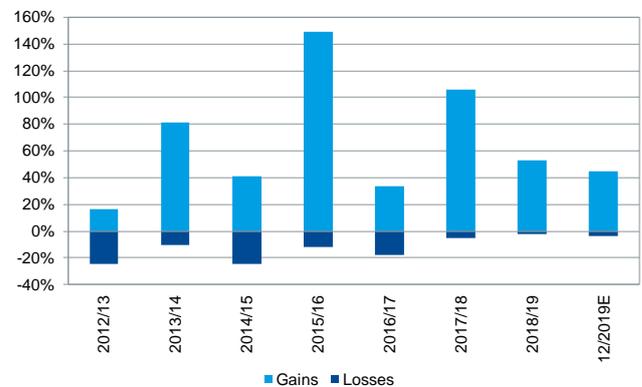
- We thus see limited downside risk within HBM current private equity portfolio, as the fund also conservatively reports private positions in acquisition costs, with an upwards revaluation only released upon new financing rounds or exits. Write-downs, on the other hand, are immediately reflected.

HISTORICAL PRIVATE EQUITIES PERFORMANCE

Gains\* and losses in absolute value



Gains\* and losses as a percentage of the total private equities value



\* Including IPO exits, trade sales and revaluations

Source: Company data, Bloomberg, Baader Helvea Equity Research

- As further described below, gains within the private equities, including revaluations, trade sales and IPO exits more than compensated for the PE losses, resulting in a positive and strong net contribution to HBM net asset value gains since 2012.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- Within the current private equities portfolio (assuming no change from positions disclosed end-2019), only four companies out of 31 (13%) are carried at a loss to investment. Looking at the impact of those losses on HBM private equities assets value, we arrive at a moderate 4% negative effect (-1.2% at Group level).

HBM private equities investments (end-2019)

Holdings	Domicile	Investment currency (LC)	Fair value 31-12-2019 (LC '000)	Ownership 31-12-2019 (%)	Fair value 31-03-2019 (CHF '000)	Fair value 31-12-2019 (CHF '000)	Estimated current fair values (CHF '000)	Amount disbursed (CHF '000)	Invested year-to-date** (CHF '000)
Shanghai Cathay Biotech	CN	CNY	1,480,500	7.9	125,101	205,522	205,790	39,184	9,633
Harmony Biosciences	US	USD	65,200	8	32,452	62,977	64,312	35,904	6,313
Neurelis	US	USD	38,700	14.6	37,522	37,411	38,173	18,544	986
Swixx BioPharma (Amicus)	CH	EUR	20,000	29	22,329	21,676	21,173	21,173	0
SAI Life Sciences	IN	INR	1,343,900	5.3	19,339	18,199	17,546	5,862	0
1mg	IN	INR	1,321,400	9.4	20,899	17,894	17,252	11,395	0
Arcutis Biotherapeutics	US	USD	15,000	4.1	0	14,499	0	14,796	14,796
Jianke Pharmaceutical	CN	USD	14,900	3.3	14,803	14,378	14,697	14,697	0
Westmed Holding	US	USD	12,400	25.2	12,374	12,019	12,231	6,905	0
FarmaLatam	PA	USD	10,900	70.2	8,830	10,509	10,752	10,752	1,973
Sphingotec	DE	EUR	9,000	14.2	5,029	9,754	9,528	9,528	4,764
Forbius (Formation Biologics)	CA	CAD	11,500	10.4	4,809	8,521	7,897	7,897	3,434
Valcare	US	USD	7,100	8.4	7,017	6,815	7,003	4,241	0
Arrakis Therapeutics	US	USD	7,000	4.8	0	6,766	6,905	6,905	6,905
Vascular Dynamics	US	USD	6,500	13.1	9,657	6,272	6,411	12,330	1,184
Shape Memory Medical	US	USD	6,000	17.1	5,971	5,800	5,918	5,918	0
ConnectRN	US	USD	5,400	19.9	6,557	5,188	5,326	5,425	1,480
Sublimity Therapeutics	IE	EUR	4,600	7.1	3,960	5,080	4,870	4,870	1,165
Adrenomed	DE	EUR	4,500	6.6	381	4,970	4,764	4,764	4,446
Complexa	US	USD	5,000	5.3	3,933	4,833	4,932	4,932	986
Cardialen	US	USD	5,000	17.8	4,976	4,833	4,932	4,932	0
Shriji Polymers	IN	INR	322,300	3	3,860	4,364	4,208	2,624	0
Vitaeris	CA	USD	4,000	18.7	3,981	3,866	3,946	2,959	0
Corvidia Therapeutics	US	USD	4,000	3.1	3,981	3,866	3,946	3,946	0
Nuance Biotech	CN	USD	3,700	3.7	3,696	3,590	3,650	3,946	0
iTeos Therapeutics	BE	EUR	3,200	5	1,801	3,496	3,388	3,388	1,694
Galecto Biotech	DK	EUR	3,200	4.3	3,552	3,448	3,388	3,388	0
Everest Medicines	CN	USD	3,000	1	2,986	2,900	2,959	2,959	0
MicroOptx	US	USD	3,000	8.3	0	2,900	2,959	2,959	2,959
Cure Everlife Holdings	MU	USD	2,700	7.8	2,986	2,621	2,663	2,959	0
BaseHealth	US	USD	2,500	6.3	2,488	2,416	2,466	2,466	0
Others					7,431	3,914	3,914	0	0
<b>Total private companies</b>					<b>382,701</b>	<b>521,297</b>	<b>507,897*</b>	<b>282,547</b>	<b>62,716</b>

\* Post-Arcutis IPO; \*\* Over April 2019 to date

Source: Company data, Bloomberg, Baader Helvea Equity Research

- The write-downs in 2019 are predominantly linked to two investments (Vascular Dynamics CHF 6.3mn, -46.6% to invested, and ConnectRN CHF 5.2mn, -43% to invested), while the CHF 20.9mn position in the India-based digital health company 1mg declined by 14.3% to CHF 17.9mn. With an average CHF 7.3mn invested per position, compared to CHF 7-10mn for the rest of the portfolio, HBM does not seem overweight on those positions, with the exception of 1mg. Assuming a worst-case write-off scenario in those 3 positions, we estimate the potential impact at -5.6% on the private equities level, and -1.9% on Group level, well within our -11% write-down average which we conservatively use to estimate upcoming downside risk in the private equities portfolio.
- 18 out of 31 companies forming the current HBM private equities portfolio (58%) are currently carried at investment cost. If extrapolating historical performance (including revaluations, trade sales and IPO exits, minus write-downs, as further described below), we see significant upside to those at-cost positions, our so-called “submerged part of the iceberg”.

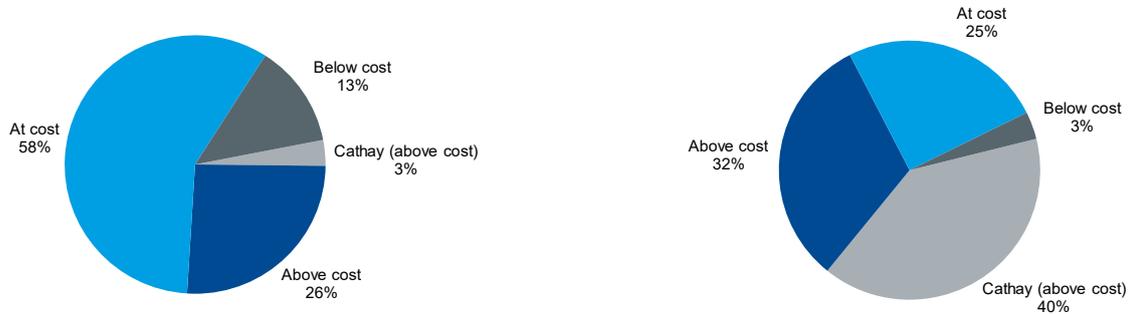
HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

PRIVATE EQUITIES PORTFOLIO STRUCTURE (END-2019E)

Relative number of private equities positions above, at and below investment costs

Percentage of the total portfolio value supported by positions above, at or below investment costs



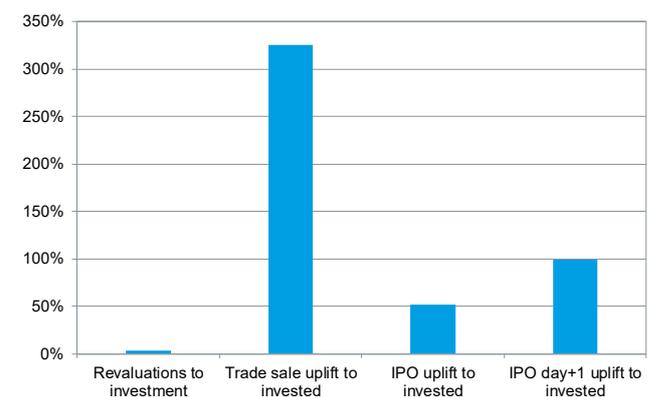
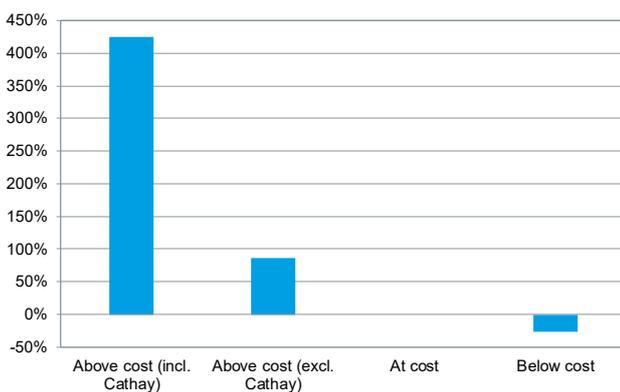
Source: Company data, Bloomberg, Baader Helvea Equity Research

- Looking at the aggregate value of companies carried at-cost, to place the investment in context, those 18 companies (out of 31) only account for 25% the private equities' total value, due to the distorting effect of the Cathay position (CHF 205mn) which now accounts for 39% of the entire private portfolio value. Cathay presents a distinct opportunity, with an announced IPO due for 2020E.
- Among the nine companies carried above investment costs (29% of private equity positions), revaluation on investment reached 179% on average. This figure is however distorted by Cathay because of a +421% revaluation on investment to date. Excluding Cathay Biotech, the average revaluation on investment reached +81%. Noteworthy, Cathay revaluation contributed to a significant part of HBM net asset value gains since 2017 (CHF 43mn in 2017/18, CHF 38mn in 2018/19, and CHF 34mn in 2019). Following Cathay's potential IPO in 2020, we expect less contribution from revaluations within the private equities portfolio, leaving most of the performance supported by trade sales and IPOs going forward.

CURRENT PRIVATE EQUITIES GAIN/LOSSES

Value revaluated (% gains/losses) among positions above, at and below investment cost (excluding IPOs and trade sales).

Revaluations and exit multiples among ex-private companies (IPOs and trade sales)



Source: Company data, Bloomberg, Baader Helvea Equity Research

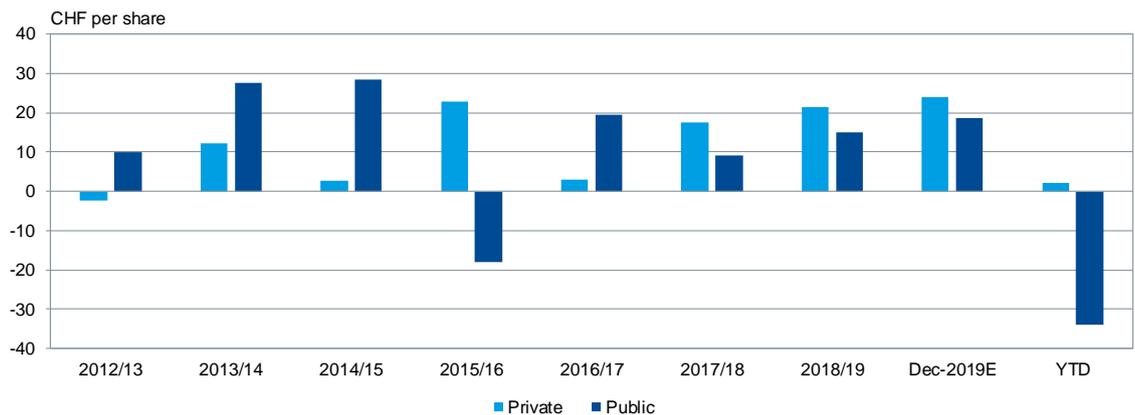
- Altogether, based on the historical trend, we see a substantial upside potential from private equities supported by trade sales and IPOs exits. Based on the 19 trade sales and IPOs within HBM's private equities portfolio since 2013, we calculated an average gain on investment as high as 325% on trade sales and 99% on IPOs.

**HBM Healthcare Investments**

Please vote for us <https://voting.institutionalinvestor.com/>

- If the exit multiple of this subset of companies would be used to extrapolate the potential value of the whole private equities portfolio (excluding Cathay, which will be likely listed in 2020), we would obtain a potential total uplift in the CHF 330-460mn range, or a positive impact at Group level between CHF 47 and 66 per share.
- Of course, as it is extremely unlikely that HBM might successfully exit its whole private equities in the foreseeable future, we prefer tracking the median annual private assets gains over the last seven years, which we estimate +21%, after write-downs (32.1% average gains (excluding Cathay) less 11.1% average write-down).
- If applied to the current private equities assets (excluding Cathay, for which we provide below a detailed analysis on the potential IPO uplift), this would translate into a potential CHF 62mn gain in 2020E, or a potential CHF 9 per share. The potential uplift from Cathay Industrial Biotech is detailed below, and estimated at CHF 58 to 81mn (CHF 8 to 12 per share).
- In order to evaluate the performance of the public equities investment, we separated the contributions from private equities IPO exits, which are actually reported by HBM within the public equities segment. Interestingly, private equities clearly outperformed public equities during 2015/16, a year when the Nasdaq Biotech Index declined by -25.6%, further demonstrating the defensive character of private equities.

Estimated per share gain/loss from the private equities portfolio (including revaluation, trade sales and IPOs) versus public equities



YTD: Year to date (January 2020 to date)

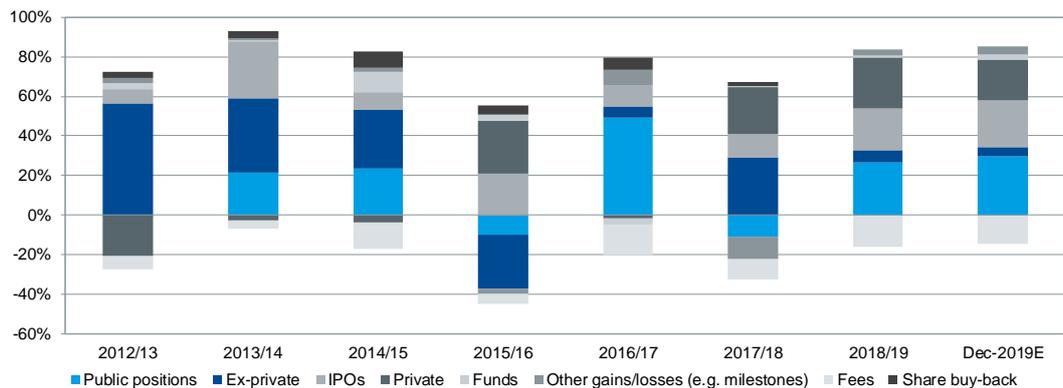
Source: Company data, Baader Helvea Equity Research

## RESPECTIVE CONTRIBUTIONS TO NET ASSET VALUE EVOLUTION

- We analyzed the evolution over time of the main contributors to HBM net asset value gain/losses, both in relative and absolute terms. We find the data relevant to better assess the potential evolution of the NAV in the worst-case scenario where IPO exits become more difficult in market downturns. As briefly described above, we find that private equities significantly contributed to HBM net asset value gains since 2013, especially in market downturns (2015/16) when public equities declined nearly double digit.

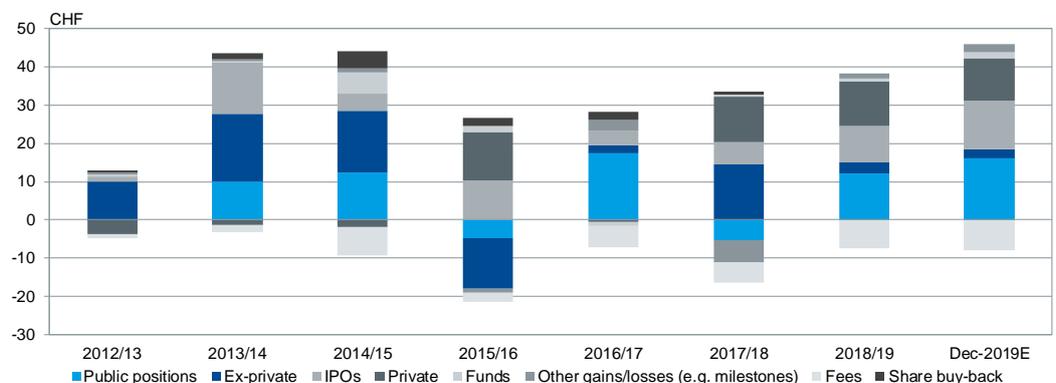
### RESPECTIVE CONTRIBUTIONS TO NET ASSET VALUE

#### Relative contributions to HBM net asset value gains/losses



Source: Company data, Bloomberg, Baader Helvea Equity Research

#### Absolute contribution to HBM net asset value per share gains/losses



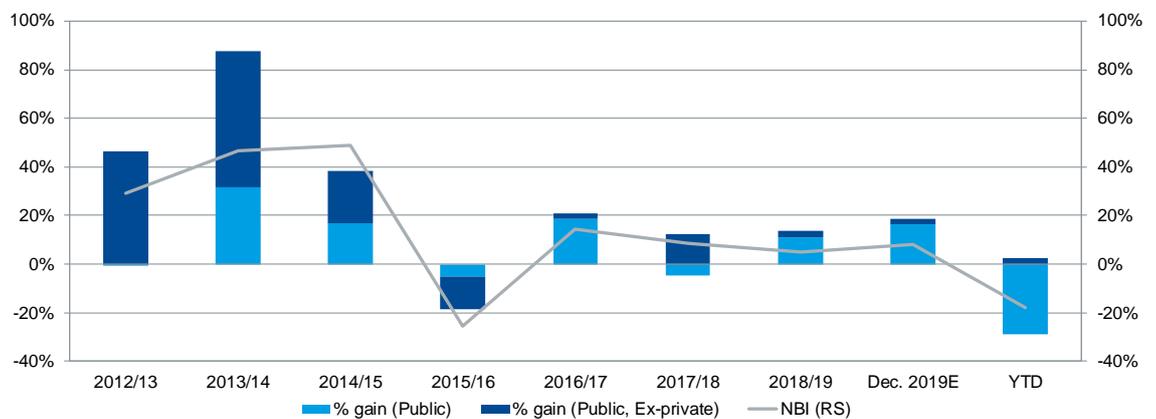
Source: Company data, Bloomberg, Baader Helvea Equity Research

- On average, we calculated that private equities gains supported about 41% of the HBM net asset value gains since 2013. The contribution is highly variable, with a contribution as high as 86% in 2015/16 when public equities corrected, and as low as 6% in 2014/15 mostly because of exceptionally high write-offs that year.
- Over the last two years, private equity gains stabilized at about 50-55% of Group NAV gains, in large part driven by Cathay Biosciences revaluations. The Cathay position grew from a regular USD 28mn investment back in 2006 (excl. follow-on USD 10mn in 2019) to CHF 205mn end-2019. Cathay was at the time HBM's first investment in China. The company develops biotechnological production process for diacids and diamines production, a key ingredient in plastics and adhesives. The company went through several rounds of follow-on financing, mostly to increase production capacity, resulting in CNY 281.9mn invested (CHF 39.4mn) on the HBM side in total but also a book value of CNY 1,480mn end-2019 (CHF 205mn), translating into a 5.2x uplift to investment.

## PERFORMANCE OF THE PUBLIC EQUITIES PORTFOLIO

- In our calculation, we exclude the private equities IPO exits from the public equities portfolio gains to provide a comparable basis against main biotech indices. When compared to the NBI since 2012, we note a modest outperformance, with ex-private stocks significantly contributing. As for most public equity funds, we see the performance largely affected by the general market sentiment. In 2015/16, at the time of the most pronounced Biotech market de-rating, HBM's private portfolio declined an estimated -18%, roughly in-line with the -23% Nasdaq Biotech Index. A comparable evolution occurred since COVID-19 outbreak.
- Looking at 2020, we thus see the performance of HBM public equities further tracking healthcare indices, and expect a rebound from current level by end-2020E. While we do not expect the sector to reach pre-COVID-19 levels, we nonetheless expect a 27% progression which would bring HBM public equities asset value at -10% versus end-2019 (currently estimated -29%).

Estimated HBM public equities performance\* versus NBI benchmark



\* Excluding IPO gains, which are attributed to the PE gains

NBI performance adjusted to HBM fiscal year

Source: Company data, Bloomberg, Baader Helvea Equity Research

- Including IPO exit gains to the public equity division might, in our opinion, distort the respective division performances. In 2019, 4 private companies were successfully listed on public markets (Galera Therapeutics, Viela Bio, SpringWorks Therapeutics, and Turning Point Therapeutics). In January 2020, Arcutis was successfully listed on the NASDAQ. We estimated HBM Healthcare pre-IPO ownership into Arcutis at USD 15mn on 1.289mn shares purchased at USD 11.6 per share, and thus the uplift on IPO at 46.6% for a net gain estimated at USD 7.0mn (CHF 6.77mn).
- Adding the 450,000 shares purchased on IPO and the 28% share price appreciation post-IPO (USD 21.80 close price), we estimate the total gains at IPO day-end at USD 15.26mn (CHF 14.77mn), translating into a 67% gain on investment over only 4 months since first investment, and a positive 0.8% gain on HBM net asset value. The ability for HBM to enter this type of attractive deal at a relatively late and de-risked point in time (first investment in October 2019), demonstrates, in our eyes, the strength of the established network.
- Arcutis Biotherapeutics develops small molecule drugs in dermatology, formulated as creams and foams. The most advanced drug, a phosphodiesterase type 4 (PDE-4) inhibitor cream formulation ARQ-151, entered phase III in plaque psoriasis end-2019. The drug is a reformulation of the PDE-4 roflumilast/Daliresp/Daxas developed by Takeda/Actavis (subsequently acquired by AstraZeneca in 2015) and approved in Chronic Obstructive Pulmonary Disease (COPD) since 2011. Arcutis in-licensed roflumilast from AstraZeneca in July 2018 as a topical ingredient in dermatology.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- The mechanism of action of PDE-4 inhibitors in psoriasis have been well described by Celgene (now at Amgen), which received its marketing authorization for Otezla, a systemic PDE-4 drug (pill, no cream formulation) back in 2014. In Celgene's phase III studies in moderate-to-severe psoriasis (baseline PASI score >12), 33% of patients benefitted from a 75% reduction in symptoms at week 16. This comes short of the efficacy reached with injectable biologics (Tremfya, Cosentyx, Taltz reached over 85% PASI 75), however is sufficient to become a preferred first-line option in psoriasis, due to its oral route of administration.
- While injectables target the inflammatory signaling at the interleukin level, PDE-4s are expected to modulate inflammation by the elevation of intra-cellular cAMP levels. In contrast to locally applied creams, Otezla has a systemic effect, posing question marks on the drug concentration in the skin and within the psoriatic area. Celgene/Amgen therefore acknowledges that Otezla mechanism of action is not well defined.
- In the recently completed phase IIb study on 332 plaque psoriasis patients, Arcutis reported statistically significant reductions versus placebo in symptoms, as well as excellent safety and tolerability. Arcutis reported a 23% to 31% PASI 75 score (versus 13% for placebo), pointing to a favorable trend. The comparability with Otezla is however limited, due to likely different patient baseline characteristics. Indeed, 49% of Otezla patients presented a psoriatic body area above 20% at baseline, while Arcutis enrolled milder psoriatic patients in its phase IIb, patients with an affected body surface area between 2% and 20%.
- Phase III top line data are expected in 1H21E. While we see ARQ-151 unlikely competing with Otezla in the moderate psoriatic segment, it might find a niche in mild psoriasis or in combination with injectable biologics. The mild US psoriasis market, currently treated by dermatologists with topical therapies, is estimated at 2mn patients. Most prescribed are corticosteroids, whose benefit in psoriasis is estimated in a wide 10% to 60% range on PASI 75, but is also associated with significant side effects (skin damage) which prevents longer-term use. Pricing is however attractive, with a monthly cost below USD 70. ARQ-151 may thus find a place on the market as a safe alternative to topical corticosteroids (although no head-to-head study has been conducted) which would allow long-term use without the corticosteroids side-effects.
- Altogether, the frequency of successful "last-minute" deals reinforce our view on HBM capabilities. On the other hand, we note that none of the longer-standing private equity positions within HBM's portfolio resulted in an exit in 2019, with the exception of Cathay Biotechnology, whose IPO is expected in 2020E.

HBM most recent IPO exits and estimated impact on HBM net asset value (15-Feb-2020)

	Est. NAV impact (%)	First investment date	IPO date
Turning Point	+2.8	Oct-2018	Apr-2019
Viela Bio	+3.4	Jun-2019	Oct-2019
SpringWorks	+2.0	Mar-2019	Sep-2019
Arcutis	+1.6	Oct-2019	Feb-2020

Source: Company data, Baader Helvea Equity Research

- With an estimated +2.8% lift on HBM net asset value mid-February 2020 (+1.9% to date), the CHF 10mn investment in Turning Point performed in October 2018 (increased by CHF 4.5mn on IPO), resulting in an estimated +1.5% NAV lift in 1Q19E after IPO, followed by a 66% share price appreciation in 3Q19. Turning Point Therapeutics is a clinical-stage precision oncology company with a pipeline of internally discovered investigational drugs designed to address key limitations of existing cancer therapies. The company's lead program, repotrectinib, is a next-generation kinase inhibitor targeting genetic drivers of non-small cell lung cancer and advanced solid tumors.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

Pre-COVID-19 HBM Public equities best/worst performers (share price) and estimated NAV movers (including IPOs).  
March 2019 to February 2020E

HBM Public equities best/worst performers (share price) and estimated NAV movers (including IPOs).  
March 2019 to 19 March 2020E

Share price gains/losses (%)		NAV main contributors (%)		Share price gains/losses (%)		NAV main contributors (%)	
BioXcel	181.6%	3.4%	Viela	Arcutis	60.0%	1.9%	Turning
Galapagos	136.8%	2.8%	Turning	Coherus	48.5%	1.6%	Arcutis
Principia	107.5%	2.0%	SpringWorks	Sesen	45.6%	1.5%	Viela
XBiotech	92.0%	1.8%	Galapagos	Arrowhea	44.4%	1.5%	Alimera
Zymeworks	89.5%	1.6%	Arcutis	Cansino	40.1%	1.2%	SpringWorks
Idorsia	84.1%	1.6%	Alimera	Galapago	36.7%	0.8%	Galapagos
Esperion	75.7%	1.5%	Y-mAbs	XBiotech	30.2%	0.8%	Principia
Viela	73.8%	1.4%	Principia	Principia	27.9%	0.6%	Vectura
Apellis	67.3%	1.1%	Esperion	Vectura	21.1%	0.4%	XBiotech
Zealand	65.5%	0.9%	XBiotech	BeigeneA	18.1%	0.4%	Coherus
Solara	63.1%	0.9%	Pacira	Idorsia	17.7%	0.3%	Arrowhead
Xenon	61.5%	0.6%	Idorsia	Zealand	16.1%	-0.5%	Albireo
Arcutis	60.0%	0.6%	Vectura	Beigene	15.5%	-0.5%	Biohaven
Bicycle	57.1%	0.5%	Argenx	Viela	11.0%	-0.6%	Retrophin
SpringWorks	51.4%	0.4%	Coherus	BioXcel	10.3%	-0.6%	Rocket
Coherus	48.5%	0.4%	ArgenxADR)	Hansa	-42.4%	-0.9%	ObsEva
Turning	48.0%	0.4%	Apellis	Y-mAbs	-45.1%	-0.9%	Immunomedics
Sesen	45.6%	0.4%	uniQure	Immunor	-49.3%	-1.0%	Ultragenyx
Arrowhead	44.4%	0.4%	BioXcel	Ultragenyx	-49.6%	-1.4%	Zogenix
Cansino	39.1%	-0.2%	Amicus	Collectis	-52.3%	-2.1%	Y-mAbs
Cytokinetics	38.2%	-0.3%	Alnylam	Collectis/	-54.3%		
Argenx	36.0%	-0.3%	Ultragenyx	Galera	-55.2%		
Pacira	33.2%	-0.8%	ObsEva	Retrophin	-56.1%		
Beigene	33.2%	-0.9%	Zogenix	Rocket	-57.3%		
Y-mAbs	31.5%			Vicore	-57.7%		
BeigeneADR)	31.2%			Jubilant	-61.7%		
ArgenxADR)	29.7%			Albireo	-62.5%		
ChemoCentryx	27.7%			Novan	-67.5%		
Divis	27.4%			Zogenix	-67.6%		
Rubius	-13.1%			ObsEva	-84.2%		
NextCure	-13.4%						
Alnylam	-13.9%						
Jubilant	-17.8%						
Albireo	-19.2%						
Amicus	-20.5%						
Vicore	-22.1%						
Nicox	-25.0%						
Retrophin	-25.5%						
Hansa	-42.4%						
Zogenix	-44.7%						
Novan	-51.0%						
ObsEva	-73.0%						

Source: Company data, Bloomberg, Baader Helvea Equity Research

- Viela Bio, a US-based biotech developing therapies against autoimmune diseases, contributed an estimated +3.4% on HBM net asset value end-February 2020E (+1.5% to date), on a CHF 20mn initial investment performed in June 2019 increased by CHF 9.5mn on IPO, which occurred only 5 months later in October 2019. The lead product candidate inebilizumab, an antibody for the treatment of neuromyelitis optica spectrum disease, has successfully completed phase III clinical development and is currently in the approval process with the US Food and Drug Administration (FDA).
- HBM invested CHF 12mn in SpringWorks Therapeutics in March 2019, increased by CHF 3.15mn upon IPO 6-months later. SpringWorks is a clinical-stage biopharmaceutical company applying a precision medicine approach to developing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. SpringWorks has a differentiated portfolio of small molecule targeted oncology product candidates and is advancing two potentially registrational clinical trials in rare tumor types, as well as several other programs addressing highly prevalent, genetically defined cancers. We estimate SpringWorks to have contributed to +2.0% on HBM net asset value gains end-February 2020E (+1.2% to date).

## FORECAST ON PUBLIC EQUITIES ASSET VALUE EVOLUTION

- We base our public equities 12-month forward estimate asset value based on the positions disclosed by HBM on end-2019, taking current consensus price targets (as of report date) as the basis for the value calculation of our estimated 12-month forward HBM public equities asset value, which we risk-adjust by 38% to reflect the current market depression. We keep unchanged the asset value of undisclosed positions (others) at current CHF 21.5mn. We carry Arcutis at CHF 43.9mn based on estimated 1.739mn shares after the IPO in February 2020.
- A significant part of HBM portfolio companies is expected to present important clinical results in 2020, which might trigger significant share price moves. Among the 50 public equity positions, we see the overweight ones (we set a cutoff at 2.0% of public equity net asset value) most susceptible to move the needle on HBM gains, and thus restrict our overview to those ones.

### Upcoming catalysts in 2020, including important clinical results and expected drug approvals in the U.S.

#### Phase II

Adrenomed*	Adrecizumab, early septic shock
Turning Point*	Repotrectinib, non-small cell lung cancer/solid tumors
Argenx	Efgartigimod, Pemphigus vulgaris
Galapagos	GLPG1972, osteoarthritis
Albireo	Elobixibat, adult liver NASH
Ultragenyx	DTX-301, cohort 4 data in OTC deficiency
Ultragenyx	DTX-401, expansion cohort 2 data in GSDIa
ChemoCentryx	Avacopan, C3 glomerulopathy C3G
ChemoCentryx	Avacopan, Hidradenitis suppurativa
ChemoCentryx	CCX140, Focal segmental glomerulosclerosis FSGS
Zymeworks	ZW49 phase I, HER2-expressing cancers

#### Phase III

Argenx	Efgartigimod, generalized myasthenia gravis
Biohaven	Rimegepant; preventive migraine prevention
Retrophin	Sparsentan, FSGS
Zogenix	Fintepla, lennox-gastaut syndrome
Albireo	Odevixibat, PFIC pediatric liver
Idorsia	Daridorexant, insomnia treatment
Uniqure	AMT-061, hemophilia B

#### US Approvals

Biohaven	Rimegepant (acute migraine prevention)
Esperion	Bempedoic acid (high-cholesterol levels, statin-resistant/intolerant)
Galapagos	Filgotinib (rheumatoid arthritis)
Immunomedics	Sacituzumab govitecan (hard-to-treat breast cancer)
Neurelis* (✓)	Diazepam nasal spray NRL-1 (epilepsy cluster seizures)
Ultragenyx	UX007 (rare condition preventing the body from breaking down fats into energy)
Viela Bio*	Inebilizumab (severe inflammatory disorder of the central nervous system)
Y-mAbs*	Naxitamab GD2 / Omburtamab B7-H3 (pediatric cancer of the CNS)
Zogenix	Fintepla (rare, severe type of childhood epilepsy)

#### IPOs (only announced)

Shanghai Cathay Biotechnology*	In Dec 2019 the company has filed for an IPO on Shanghai's Star Market
Arcutis Biotherapeutics*	In Jan 2020 the company has filed for an IPO on US NASDAQ Market

\* Private/ex-private companies

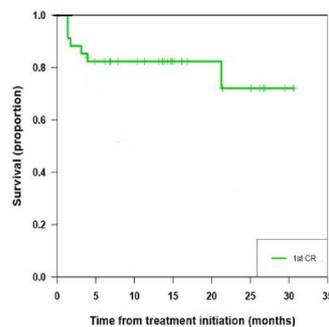
Source: Company data

- The ex-private position Y-mAbs became one of the largest public position at HBM, with a net value estimated at CHF 39mn as of report date (6.8% of HBM public equities total value). Although the company is well capitalized with a cash runway well into 2022E and first product revenues expected in 2020E, the stock lost 45% following the COVID-19 correction, impacting HBM net asset value by estimated -2.1%. We definitely see Y-mAbs stock recovering relatively rapidly, also due to its focus on orphan pediatric oncology, which we believe should remain unaffected by the COVID-19 slow-down.
- The US-based biotech company develops therapies in pediatric oncology, and expects FDA marketing approval for its first therapy in 2020E. Y-mAbs filed its GD2-targeting antibody Naxitamab with the FDA in November 2019, and expects to complete the filing for its B7-H3 bispecific omburtamab in 1Q20. Y-mAbs estimates the addressable pediatric neuroblastoma population in the U.S. for naxitamab at 950 patients (first and second-lines combined) and the omburtamab addressable population at 480 patients. Depending on pricing, which we assume in the USD 500,000 range, approval of both drugs might present a USD 750mn opportunity, at full market penetration (Y-mAbs current EV at USD 1,27bn). With a consensus target price at USD 40 (105% upside versus current level), we see Y-mAbs largely de-risked and likely to remain a top holding at HBM going forward.

- Neuroblastoma is an extra-cranial cancer which accounts for approximately 8-10% of all cancer-related deaths in the pediatric population. Fortunately, it is a rare disease with 600-800 new cases reported annually in the U.S. Surgical resection stays the preferred option but very often the disease is diagnosed at an advanced metastatic stage. Outcomes have improved over the last decades with now 5-year survival rates reaching 60-70%, a progression however mostly due to improved cure rates in the low-risk group.
- The mainstay of treatment consists of induction chemotherapy/radiotherapy (doxorubicin, cyclophosphamide, cisplatin), followed by high-dose consolidation chemotherapy and when possible myelo-ablative chemotherapy with autologous stem cell transplant (ASCT). Maintenance is subsequently given for 6 months, and typically includes retinoic acid, IL-2 to boost activity of immune cells, GM-CSF to help white blood cells production, and since 2015 the anti-GD2 antibody Dinutuximab. GD-2 is a glycol-lipid generally found overexpressed on neuroblastoma cancer cells, and thus presenting a decent target for targeted therapies.
- Dinutuximab is marketed by United Therapeutics in the U.S. (Unituxin) and by Apeiron/EUSA in Europe (Isquette). As a maintenance therapy, Unituxin improved overall survival over retinoic acid by 42% at 24 months (86% vs. 75%) and event free survival at 2 years by 20% (66% vs. 46%). In 2018, United Therapeutics reported USD 84.8mn Unituxin sales in the U.S. The recommended dose of dinutuximab is 17.5 mg/m<sup>2</sup> daily infused IV over 10-20 hours for 4 consecutive days for up to 5 cycles. At a 17.5mg vial priced at USD 12,000, we estimate the annual treatment cost at USD 240,000 and an average 350 patients treated annually.
- Y-mAbs presented competitive data with Naxitamab end-2019 reporting a 72.1% event free survival at 2 years, and 86.3% overall survival (34 patients, high-risk stage 4 in first complete remission). The results were achieved without ASCT, and although the study was uncontrolled, the potency appears competitive versus dinutuximab historical data. Naxitamab might thus become the preferred option, removing requirement for ASCT and hospitalization. Distribution in the outpatient setting might in addition significantly lift revenues.

Naxitamab front-line neuroblastoma data without standard ASCT

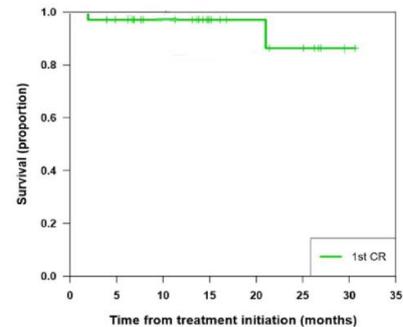
2-year Event Free Survival:



72.1%, 95% CI = (53.1%,97.7%)

vs. Dinutuximab 63%

2-year Overall Survival:



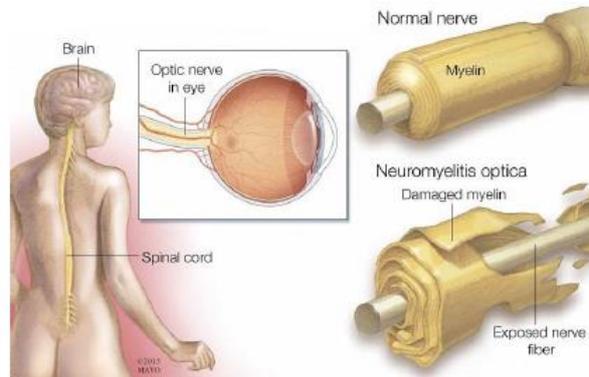
86.3%, 95% CI = (68.0%,100.0%)

vs. Dinutuximab 84%

Source: Y-mAbs. ASCT: autologous stem cell transplant

- The ex-private position Viela Bio currently accounts for an estimated 8.9% of HBM public equities investments as of report date. After the 74% return on investment on IPO, and a share target price now aligned on consensus expectations, we see moderate upside potential within 2020. The lead product candidate inebilizumab, an anti-CD19 antibody for the treatment of neuromyelitis optica spectrum disease (NMOSD), has successfully completed phase III clinical development and is currently in the approval process with the US Food and Drug Administration (FDA). The indication is however getting crowded, after Roche received in September 2019 a marketing authorization in NMOSD for its anti-IL-6 antibody satralizumab, on a 74% reduction of risk of relapses as add-on therapy in AQP4-IgG seropositive patients. As a monotherapy, Roche disclosed a 55% relapse risk reduction on the tested patient pool (65% AQP4+), pointing to a significantly higher potency in AQP4+ patients.

Neuromyelitis Optica



Source: Company data

- In June 2019, Alexion received the FDA green light (with a black-box warning) for the anti-C5 Soliris in the same indication, on an impressive 94% risk reduction. It is thus relatively unclear how inebilizumab 73% risk reduction (77% in AQP4+) and 6-month dosing interval (versus every two weeks for Soliris and every month for Roche) but likely immune depletion, will play against competition. Typically, anti-CD19/20 therapies are associated with an increased risk of infection and malignancies, and often a risk-mitigation plan is required regarding Progressive Multifocal Leukoencephalopathy. In Viela Bio clinical studies, one patient developed seizures with large new cerebral lesions on MRI, and PML was suspected but not confirmed in that patient. Authors of the study stated that “it was not possible to exclude a relationship to treatment”.
- According to HBM, Inebilizumab will differentiate from the competition on a favorable safety profile, on a mechanism of action that is well-understood and accepted by clinicians, and on a convenient administration regimen of once every six months. Used in the indication with a high single-digit thousands of patients in the U.S. alone combined with orphan pricing, Inebilizumab is well-positioned to capture a large share of what is to become a billion-dollar market. In addition to Inebilizumab, Viela Bio is developing a pipeline of products with a number of late stage trials in inflammation/autoimmunity indications of high unmet medical need.
- Zogenix (1.8% of public equities) expects phase III data with Fintepla in Lennox-Gastaut syndrome, a rare form of pediatric epilepsy of unclear origin. Zogenix previously presented positive phase III data in Dravet syndrome (against placebo), another type of pediatric epilepsy, caused by a rare genetic mutation affecting voltage-gated sodium channels. Fintepla is a low-dose formulation of Fenfluramine, originally developed by Wyeth as an appetite suppressant under the brand Pondimin (1973) and later discontinued due to risk of cardiac valvulopathy. Its mode of action involves serotonin release, whose role in epilepsy seizure remains unclear. However, at least one retrospective clinical study in epileptic patients taking comparable selective serotonin re-uptake inhibitors (SSRIs) did conclude on a potential association with decreased seizure frequency.
- Turning Point (2.7% of public equities) is expected to present phase II data in 2020 with repotrectinib in ROS1-positive non-small cell lung cancer (NSCLC). The ROS/TRK macrocycle inhibitor was initially designed to address developed resistances to current ALK-inhibitors, and thus initially investigated on TKI-pretreated patients, showing a positive 39% response rate and confirmed CNS activity. Now Turning Point intends to expand in the first-line setting, against Roche’s Entrectinib and Pfizer’s Xalkori/Lorbrena.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

Pre-COVID-19 HBM top public equities holdings (cut-off at 2.0% of public equities total asset value, 15-Feb-2020E)

Holdings	Percentage of public equities asset value (%)	Estimated value (CHF '000)
Y-mAbs Therapeutics	10.1	94,352
Viela Bio	8.7	81,101
Pacira Pharmaceuticals	5.1	47,304
Arcutis	4.6	43,079
SpringWorks Therapeutics	4.4	40,739
Galapagos	3.6	33,970
Esperion Therapeutics	3.3	31,197
Turning Point Therapeutics	3.2	29,568
Immunomedics	2.8	26,583
uniQure	2.7	25,481
Principia Biopharma	2.7	25,337
Biohaven Pharmaceuticals	2.7	24,907
Ultragenyx Pharmaceutical	2.6	24,475
XBiotech	2.6	24,221
Argenx (ADR)	2.5	23,841
Argenx	2.5	23,836
Retrophin	2.1	19,948
Idorsia	2.1	19,356
Rocket Pharmaceuticals	2.0	18,493
Zogenix	2.0	18,324

Source: Company data, Bloomberg, Baader Helvea Equity Research

Current HBM top public equities holdings (cut-off at 2.0% of public equities total asset value, 19-Mar-2020E)

Holdings	Percentage of public equities asset value (%)	Estimated value (CHF '000)
Viela Bio	8.9	52,044
Arcutis	7.4	43,277
Y-mAbs Therapeutics	6.8	39,570
Pacira Pharmaceuticals	5.0	28,963
SpringWorks Therapeutics	4.7	27,376
Galapagos	3.4	19,543
Argenx	3.2	18,421
uniQure	2.9	16,930
XBiotech	2.8	16,506
Biohaven Pharmaceuticals	2.8	16,415
Argenx (ADR)	2.8	16,404
Turning Point Therapeutics	2.7	16,009
Principia Biopharma	2.7	15,694
Esperion Therapeutics	2.6	14,920
Immunomedics	2.4	14,206
Ultragenyx Pharmaceutical	2.4	13,958
Idorsia	2.1	12,372
Retrophin	2.0	11,803

Source: Company data, Bloomberg, Baader Helvea Equity Research

- Among the 50 disclosed positions, consensus expects a share price appreciation of 95% on average which, in our opinion, reflects a too bullish view on the healthcare sector. We thus present HBM public equities calculated 12-month net asset value based on consensus at CHF 1,197mn and our risk-adjusted estimates pointing at a CHF 740mn (+27% growth from estimated current asset value).
- Taking a holistic approach, our risk-adjustment is based on the historical performance of HBM public equities (excluding the uplifts from private equity deals, which we attribute in our valuation to the private equities segment). As described above, we see HBM public equities historical performance closely tracking the Nasdaq Biotech Index, which went through ups and downs over the last 4 years (2016: -21%; 2017: +22%; 2018: -9%; 2019: +24%) on a mix of political headwinds in the U.S. and innovation cycle maturation.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

HBM Public equities estimated value (on 19-Mar-2020) and 12-month forward estimates (based on positions disclosed end-2019)

Holdings	Currency	Number of shares	Est. current value (LC, '000)	Est. current value (CHF, '000)	Share price (LC)	Est. 12-months future value (LC, '000)	Est. 12-months future value (CHF, '000)	Consensus price targets (LC)
Y-mAbs Therapeutics	USD	2,787,825	40,117	39,570	14	111,513	109,994	40
SpringWorks Therapeutics	USD	1,263,846	27,754	27,376	22	56,873	56,099	45
Viela Bio	USD	1,750,000	52,763	52,044	30	76,125	75,088	39
Pacira Pharmaceuticals	USD	950,262	29,363	28,963	31	52,740	52,021	56
Zogenix	USD	613,106	10,913	10,765	18	36,480	35,983	60
XBiotech	USD	1,695,467	16,734	16,506	10	47,473	46,827	28
Immunomedics	USD	1,478,689	14,402	14,206	10	39,925	39,381	27
Turning Point Therapeutics	USD	500,000	16,230	16,009	32	32,500	32,057	65
Biohaven Pharmaceuticals	USD	548,137	16,641	16,415	30	41,110	40,550	75
uniQure	USD	400,000	17,164	16,930	43	34,400	33,932	86
Galapagos	EUR	130,000	18,460	19,543	142	24,717	26,167	190
Esperion Therapeutics	USD	450,433	15,126	14,920	34	38,287	37,765	85
Argenx	EUR	150,000	17,400	18,421	116	24,000	25,408	160
Argenx (ADR)	USD	150,000	16,631	16,404	111	27,000	26,632	180
Principia Biopharma	USD	365,772	15,911	15,694	44	25,604	25,255	70
Idorsia	CHF	600,000	12,372	12,372	21	19,200	19,200	32
Rocket Pharmaceuticals	USD	784,438	7,617	7,513	10	27,455	27,081	35
Intercept Pharmaceuticals	USD	142,396	6,885	6,791	48	21,075	20,788	148
Ultragenyx Pharmaceutical	USD	405,000	14,151	13,958	35	30,375	29,961	75
Retrophin	USD	1,205,013	11,966	11,803	10	37,355	36,847	31
ChemoCentryx	USD	345,144	11,297	11,143	33	18,638	18,384	54
Zymeworks	USD	300,000	7,428	7,327	25	17,400	17,163	58
Apellis Pharmaceuticals	USD	440,000	8,800	8,680	20	20,680	20,398	47
NextCure	USD	238,331	8,525	8,409	36	17,279	17,044	73
Nicox	EUR	2,383,808	8,439	8,934	4	28,606	30,283	12
Alexion Pharmaceuticals	USD	100,000	8,250	8,138	83	14,500	14,303	145
Amicus Therapeutics	USD	1,059,061	8,780	8,660	8	20,122	19,848	19
Beigene	HKD	700,000	62,440	7,940	89	89,649	11,400	128
Beigene (ADR)	USD	50,000	7,797	7,690	156	10,500	10,357	210
Albireo Pharma	USD	350,000	4,232	4,174	12	21,700	21,404	62
Zealand Pharma	DKK	250,000	50,600	7,150	202	60,567	8,558	242
Jubilant Life Sciences	INR	1,002,263	255,326	3,334	255	686,550	8,964	685
Xenon Pharmaceuticals	USD	521,789	4,216	4,159	8	13,045	12,867	25
Assembly Biosciences	USD	290,727	3,439	3,392	12	7,995	7,886	28
Galera Therapeutics	USD	446,557	2,630	2,594	6	8,261	8,149	19
Divis Laboratories	INR	221,265	413,976	5,405	1,871	470,631	6,145	2,127
Collectis (ADR)	USD	300,000	2,517	2,483	8	13,200	13,020	44
Collectis	EUR	250,000	1,923	2,035	8	6,375	6,749	26
BeyondSpring	USD	287,020	3,123	3,080	11	9,759	9,626	34
Cytokinetics	USD	400,000	3,500	3,452	9	8,400	8,286	21
ObsEva (ADS)	USD	1,075,428	2,172	2,143	2	15,056	14,851	14
Vicore Pharma	SEK	2,419,438	16,694	1,587	7	101,616	9,658	42
Solara Active	INR	611,806	258,580	3,376	423	400,733	5,232	655
Novan	USD	1,175,330	364	359	0	1,763	1,739	2
Guangzhou Baiyunshan	HKD	1,086,000	19,418	2,469	18	43,440	5,524	40
Cansino Biologics	HKD	484,200	39,995	5,086	83	35,649	4,533	74
Alimera Sciences	USD	466,666	1,456	1,436	3	10,850	10,702	23
Bicycle Therapeutics (ADR)	USD	357,143	3,929	3,875	11	6,607	6,517	19
BioXcel Therapeutics	USD	230,000	3,705	3,655	16	6,555	6,466	29
Arcutis*	USD	1,739,000	43,875	43,277	27	43,875	43,277	25
Others				21,529		21,529	21,529	
<b>Total public companies net asset value</b>				<b>583,174</b>			<b>1,197,898</b>	
<b>38% Risk-adjusted 12-months net asset value</b>							<b>740,631</b>	

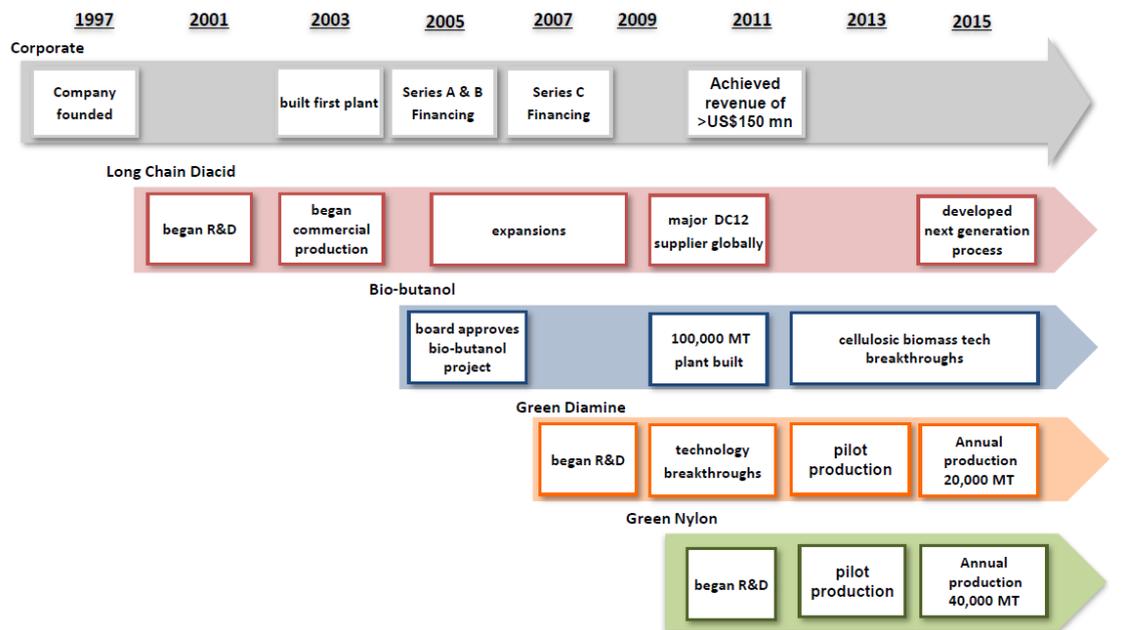
\* Estimated after IPO on 3-Feb-2020

Source: Company data, Bloomberg, Baader Helvea Equity Research

## CATHAY INDUSTRIAL BIOTECHNOLOGY

- Cathay Industrial Biotechnology is a Shanghai-based white-biotech chemicals manufacturer founded in 1997. End-2019, HBM reported a CHF 205mn position in Cathay, its largest position within the private equities portfolio (38% in value). Cathay was HBM's first investment in China back in 2006. Over time, the position grew from an initial USD 28mn investment to estimated CHF 205mn to date (incl. USD 10mn follow-on investment in 2019).

### Cathay Industrial Biotechnology historical development



Source: Cathay Industrial Biotechnology (2015)

- Due to the overweight on Cathay, potential gains on IPO might thus significantly raise HBM net gains in the current year. According to HBM reporting a 7.9% ownership in Cathay, the company has a book value of CHF 2,616mn pre-IPO (USD 2,694mn). We see the potential valuation post-IPO in the USD 3.1bn to USD 5.2bn range. This would translate into an estimated net gain for HBM at between CHF 58mn and 81mn (CHF 8 to 12 per share).
- We estimate that Cathay aims at raising between CNY 3.5bn and 5.5bn capital (USD 500mn to 800mn), which would require a 12% to 19% dilution based on our USD 4.15bn mid-range company valuation. Cathay has filed a prospectus with the Chinese market regulator end-2019, and intends to invest USD 505mn in production capacity extension in 2020. Previously, the company completed a first USD 490mn investment tranche in 2018, on private equity investment and own cash investment. The newly constructed production plant in Wusu (China) went into operation end-2018, and is designed to triple Cathay's total production capacity. We believe the targeted post-IPO extension to lift total production capacity by 70%, securing robust growth going forward and possibly overshooting our estimated growth.

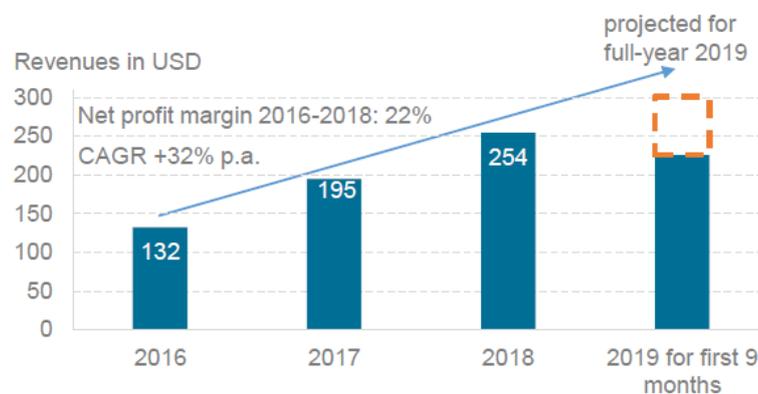
Cathay Industrial Biotechnology new production plant in Wusu (China, 2019)



Source: Siemens

- We believe that Cathay will present an attractive profile for investors, based on the product commercial potential and financial achievements. Cathay sales over 2016-2019 more than doubled from USD 133mn in 2016 to expected USD 305mn in 2019E, while EBITDA progressed from USD 33.5mn to expected USD 79.8mn. Growing earnings at a CGAR rate at 24% over 2016-19, we estimate the additional production capacity established in 2018 (and post-IPO) to accelerate sales and earnings growth going forward.

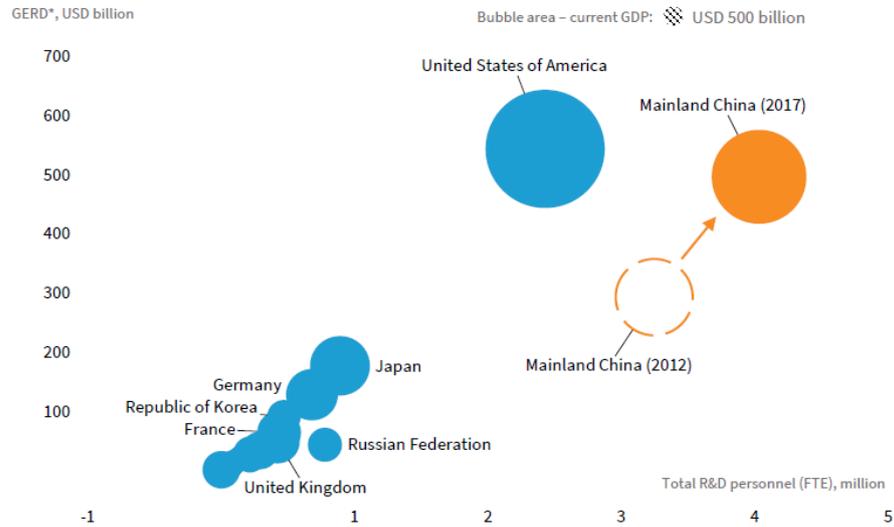
Cathay Biotech revenue progression (USD)



Source: Company data

- Cathay Industrial Biotechnology is becoming the largest player in China in green biotechnology-produced long-chain dicarboxylic acids (LCDA), rated the single champion of the manufacturing industry by the Chinese Ministry of Industry and Information Technology. The Chinese State support for bio-manufacturing technologies, in order to improve the industry environmental impact and to reduce dependence on imported raw materials, has been included in the Chinese strategic development plan “Made in China 2025”.
- The chemical intermediates produced by Cathay, using bio-based raw material (corn, glucose, and renewable sources of fatty acids), are used across a wide range of industries, including engineered plastics for automotive, electronics and electrical industries. Cathay also recently developed a process for bio-based polyester and polyamide production, gaining technological parity or competitive advantage over Western companies.
- According to UNESCO and World Bank data, capital invested in R&D in China almost doubled over 2012-17, and number of employees in R&D in China caught up and exceeded the U.S.

Countries by labor and capital involvement in R&D

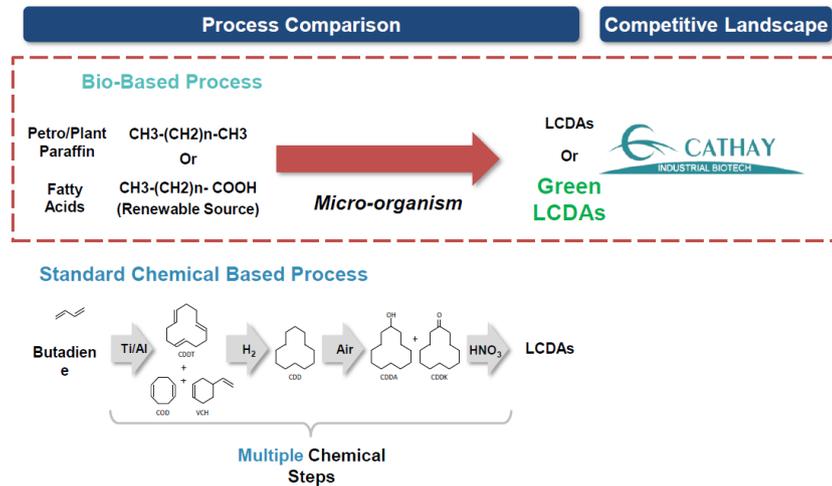


\* Gross Domestic Expenditure on R&D

Source: EqualOcean, UNESCO, World Bank data

- According to Cathay, most Western competitors (Evonik, Invista, Ube, DuPont, Novo Nordisk, BASF) continue to produce those chemicals using conventional chemical reactions, and taking petrochemicals (mostly butadiene) as a raw material source.

Bio-based process versus multi-steps chemical synthesis



Source: Cathay Industrial Biotechnology (2015)

- While biotechnology-based processes often proved too costly in the past, technology breakthroughs, such as those implemented by Cathay, validate the feasibility of the bio-based route. As a side remark, Cathay's top-notch production process is highlighted by Siemens in its current corporate communication. Siemens has indeed introduced the digitalization process at Cathay's Wuzu plant (<https://new.siemens.com/cn/en/company/topic-areas/ingenuity-for-life/cathay-biotech.html>), allowing state-of-the-art control on production.
- As a tangible demonstration of effectiveness, Cathay's EBITDA margin, above 30% since 2016, comes on the high end of industry peers. In the following, we provide an overview of the sector peers (based on pre-COVID-19 multiples, and assuming a rebound end-2020E) including respective valuations, which brought us to the conclusion that Cathay Industrial Bioscience might likely reach a valuation between USD 3.1bn and 5.2bn.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

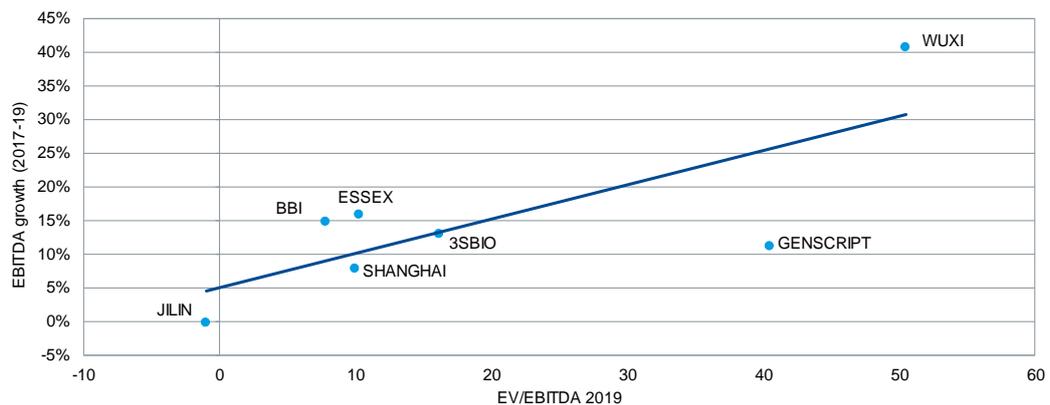
Cathay peers valuation (pre-COVID-19)

Name	Currency	Mcap. (mn)	EV (Feb-2020)	EV (2017)	EV/EBITDA (2019)	EV/EBITDA (2017)	EBITDA CAGR (2017-2019); (%)	EBITDA margin (2019); (%)
WUXI BIOLOGICS CAYMAN INC	CNY	97,898	79,302	40,272	50.51687	71.57278	40.8	41
3SBIO INC	CNY	36,996	33,132	34,000	16.18578	23.92999	12.9	36
GENSCRIPT BIOTECH CORP	USD	26,272	2,887	4,300	40.4845	82.83568	11.2	28
JILIN PROVINCE HUINAN-H	CNY	577	-176	0	-0.9799	0.000863	-0.1	28
SHANGHAI HAOHAI BIOLOGICAL-H	CNY	8,290	5,941	3,400	9.960066	7.160985	7.9	32
BIOSINO BIO-TECHNOLOGY -H	CNY	201	344	439	14.33706	12.59106	-11.7	12
BBI LIFE SCIENCES CORP	CNY	1,490	1,114	1,570	7.788968	16.59356	14.8	21
ESSEX BIO-TECHNOLOGY LTD	HKD	3,594	3,338	2,370	10.23908	11.29278	15.8	23
CHINA REGENERATIVE MEDICINE	HKD	616	1,018	5,213	-2.73005	-29.3882	28.1	0
CATHAY INDUSTRIAL BIOTECH.	CNY						28.9	35

Source: Company data, Bloomberg, Baader Helvea Equity Research

- We derive our Cathay estimated enterprise value on a 30x to 50x EV/EBITDA multiple, on an estimated 2019 EBITDA at CNY 7.38bn (USD 106mn), fitting to the linear regression of sector peers EV/EBITDA multiples adjusted for earnings growth over 2017-19. With a 28.9% EBITDA growth over that period and a likely acceleration going forward due to the additional production capacity at Wusu, we see Cathay's growth quality also appealing. Positioned in a high-growth market and supported by China's strategic development plans, we see low risk for negative surprises.

Cathay sector peers EBITDA growth versus 2019 EV/EBITDA multiples



Source: Company data, Bloomberg, Baader Helvea Equity Research

- In comparison with international peers, we are aware of Japanese Ube industries, trading (pre-COVID-19) at 5x earnings, but not significantly active in the white biotech segment and with stalling earnings growth, as well as Evonik (6x EV/EBITDA), also crossing a transition phase.
- The worldwide bio-based chemical production continues to hold a tiny 2% market share, relatively stable since 2015 after the drop in crude oil prices boosting the profitability of petrochemical-based production. Traditional nylon production is a particularly high consumer of oil, with one ton of oil required to produce one ton of nylon. In China, efforts to reduce dependence on foreign oil imports and new environmental regulations are expected to boost bio-based approaches. However, we point to the significant risk associated with crude oil prices (which might decline going forward and support petrochemicals), electricity prices in China and corn prices. On the other hand, Cathay's production costs might also benefit from declining oil prices, since it appears that the company sources a large part of raw materials from petrochemicals for the production of its long-chain diacids. Cathay indicates that those mixed alkanes can be obtained from vegetable oils, however the source of those raw materials, biological or petrochemical, are not disclosed by the company.
- Cathay revenues so far stem 98% from bio-based chemical building blocks (long-chain diacids). However, with the addition of diamine fermentation capabilities, Cathay now intends to grow its polyamide (nylon) production. Cathay estimates the Chinese demand for nylon at 4.3mn tons in 2018, and established at 100,000 tons bio-based production capacity in Wusu in 2018, translating into a targeted 2.3% market share. According to ICBC, China's domestic demand for nylon doubled over 2011-18. The extension of the production capacity upon

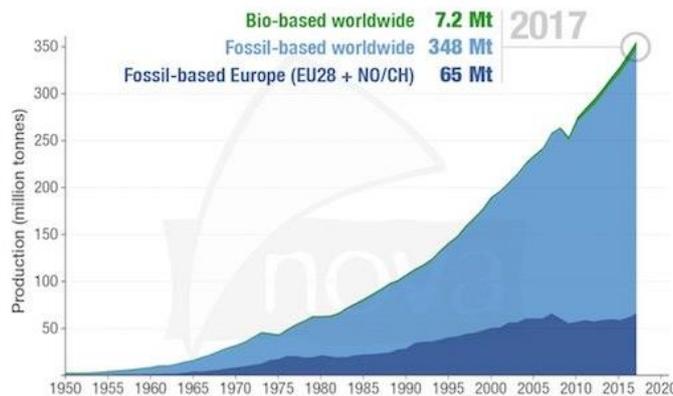
HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

successful IPO would add another 100,000 tons nylon capacity to reach a 4.6% market share. Based on a bulk price for nylon at USD 2 per kg, we expect the full nylon production capacity, or 200,000 tons per year, to translate into additional USD 200mn recurrent revenue, lifting current revenues by 67%.

- In parallel, Cathay is expected to also expand the production of its current product line. After the completed extension of 30,000 tons of diacids at Wusu (in addition to 40,000 tons in Jinxiang), an additional 30,000 tons are planned post-IPO. The Wusu production plant has also an installed 50,000 tons diamines production capacity, expected to reach 100,000 tons post-IPO.

Global plastics production from 1950 to 2017, including bio-based plastics



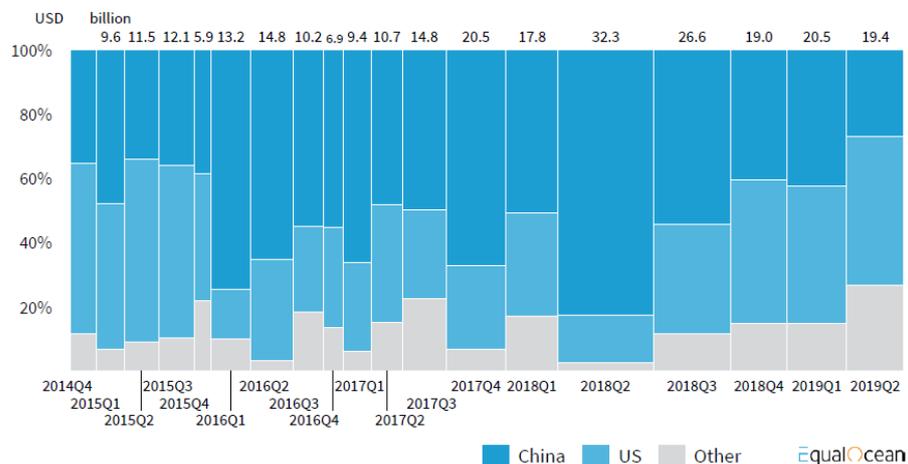
Source: Nova-Institute.eu

- The enforcement of the Chinese 13<sup>th</sup> Five-Year plan for environmental protection published in 2016 led to a shut down in 30% to 40% of all Chinese production capacity in monosodium glutamate and certain dyestuffs. Bio-based technologies have also been recognized as China’s “Strategic Emerging Industries” and are increasingly supported by the China Ministry of Industry, the China Textile Association and the China Chemical Fiber Association.

Chinese IPO and VC scene

- The number of tech startups in China grew at a very high pace over the last decade, attracting over 80% of the total private equity funding volume since 2010. According to Crunchbase, the total volume of VC investments in China-based companies reached USD 154bn over the last 5 years, compared to USD 103bn in US-based private companies.

Venture capital invested in China and the U.S. (funding rounds over USD 100mn)



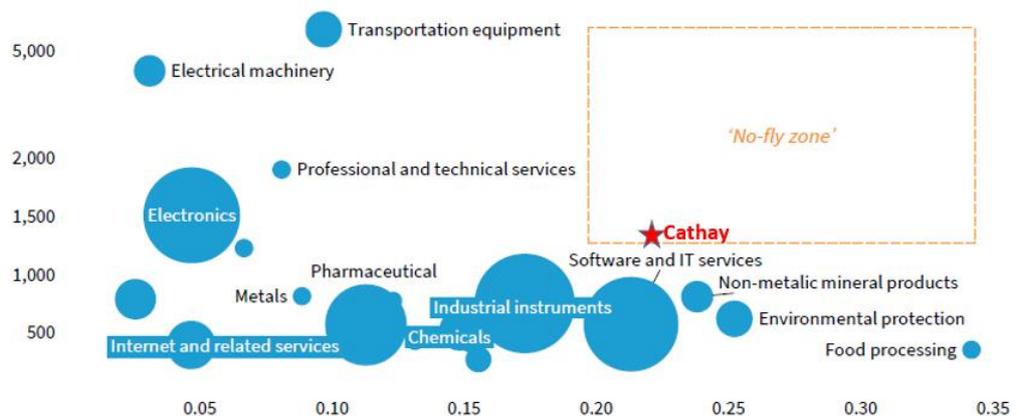
Source: EqualOcean, Crunchbase

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

- China's public equity markets, however, appear relatively unattractive for most private firms due to over- or under-regulation and high volatility. The Chinese current public equities market is dominated by state-backed companies, where commercial banks outweigh other sectors. As a result, 56 China-based companies with a market capitalization over USD 1bn are currently listed in the U.S.
- To prevent further listing abroad, China's regulators have launched a "Nasdaq-like" trading venue on the Shanghai Stock Exchange, where Cathay Industrial Biotechnology filed for listing. The new registration-based IPO system on the Star Market is expected to significantly shorten reviewing time, from the previous 18 months average to less than 100 days. To address volatility, traders must now register on the Star Market with at least two years of related experience and more than CNY 500,000 (USD 72,000) capital.

Star Market applicants, according to profitability and size. Cathay Industrial Biotechnology shown in red



X-axis: Industry average net profit margin (%); Y-axis: Full-time employees; Bubble area: Number of firms  
Source: Adapted from EqualOcean

- Looking at the Star Market applicants, we see Cathay Industrial Biotechnology, with a clean balance sheet (positive net cash USD 9.5mn), a 22% net profit margin and 1,300 FTEs well positioned in terms of size and profitability to attract investors' attention. Software and IT services dominate the high-profitability segment, however an improvement towards the "no-fly zone" is rather unlikely in that sector, mostly due to the IT price sensitivity in the international context.

Funds

- HBM has investments in healthcare-dedicated funds, granting access to private equities across non-core geographies such as Asia and India. Interestingly, in 2018 the Shanghai-based 6-Dimensions Capital co-led the USD 250mn Series A financing in the US-based Viela Bio, likely facilitating HBM's later participation in the company pre-IPO, which has resulted in an estimated 133% return on investment mid-February 2020.
- HBM's participation in funds is therefore a straightforward sourcing tool for new private equity investments, providing exposure to geographies typically difficult to cover for Europe-based investors.
- Investments in funds currently account for 9% of HBM net assets, on a total fair value at CHF 153mn. Due to the limited visibility in those funds' structures, we carry those assets at reported fair value.

HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

HBM participations in funds (end-2019)

Funds	Invest. currency	Total commitment (LC mn)	Payments in rep. period (LC mn)	Repayments in rep. period (LC mn)	Cumulative payments 31-12-2019 (LC mn)	Cumulative repayments 31-12-2019 (LC mn)	Fair value 31-12-2019 (LC mn)	Fair value 31-12-2019 (CHF '000)	Est. current fair value (CHF '000)
WuXi Healthcare Ventures II	USD	20	0.8	0.7	18	1.3	39	37,690	38,469
MedFocus Fund II	USD	26	10	10	26	25	23.4	22,591	23,081
HBM BioCapital II	EUR	42	1.4	0.6	42.6	9.8	18.6	20,210	19,691
6 Dimensions Capital	USD	25	2.3	1.2	18.6	1.3	19.3	18,636	19,037
HBM Genomics	USD	15	3.1		15.2	0	14.4	13,879	14,204
Tata Capital HBM Healthcare Fund I	USD	10	0.2		9.6	4.7	9.4	9,095	9,272
Hatteras Venture Partners III	USD	10			10	2	6.5	6,276	6,411
BioMedInvest II	CHF	10			10	3	5.7	5,670	5,670
Galen Partners V	USD	10			10.4	8.8	5.7	5,468	5,622
BioMedInvest I	CHF	26		0.8	26	26.4	3.2	3,224	3,224
C-Bridge Capital IV	USD	10	2.2	0.1	3.6	0.2	3	2,927	2,959
BioVeda China IV	USD	5	1.1	0.3	2.4	0.3	1.9	1,866	1,874
Nordic Biotech	DKK	31			31	221.7	8.3	1,203	1,173
LYZZ Capital Fund II	USD	15	0.8		0.8	0	0.8	784	789
Tata Capital Healthcare Fund II	USD	20	0.5		0.5	0	0.5	508	493
Others								1,435	1,435
<b>Total funds</b>								<b>151,462</b>	<b>153,405</b>

Source: Company data, Bloomberg, Baader Helvea Equity Research

- Those funds focus on the broad healthcare sector, including medical devices, drug development, digital healthcare and diagnostics. Interestingly, HBM Genomics is a thematic fund dedicated to genomics, but also include health analytic companies.

HBM participations in private equity funds

 <p><b>BioVeda China</b></p> <p>Invested: 2005 Investment: 8.5 m Investment multiple: 3.7x Ownership: 34%</p> <p>Healthcare</p> <p>Fund strategy: Later and growth stage opportunities</p> <p>Investment thesis: One of the first local investors specialised in the Chinese healthcare market</p> 	 <p><b>WuXi Healthcare</b></p> <p>2015 20 m 2.4x 7%</p> <p>Healthcare</p> <p>Access to early stage investment opportunities with a focus on China</p> <p>Seasoned investment team, former WuXiAppTec, with vast network facilitating / offering deal flow possibilities</p> <p>Currently no co-investment</p>	 <p><b>6- Dimensions Capital</b></p> <p>2018 14 m 0.9x 5%</p> <p>Healthcare</p> <p>Invest and build quality platform companies currently missing in China</p> <p>VC with capabilities in China and U.S. to access innovation and build category leaders in healthcare sectors</p> 	 <p><b>Tata Capital</b></p> <p>2015 10 m 1.4x 67%</p> <p>Healthcare</p> <p>Growth and expansion phase</p> <p>Partnering with one of the leading on-shore private equity investors in Indian life sciences</p>  	 <p><b>Medfocus</b></p> <p>2005 16 m 2.1x 100%</p> <p>Medical devices</p> <p>Incubator and accelerator concept, selective later stage investments</p> <p>Access to promising early stage investments in later rounds; "raised" by successful entrepreneurs</p>     	 <p><b>HBM Genomics</b></p> <p>2015 15 m 0.9x 100%</p> <p>Genomics</p> <p>Early and development stage opportunities</p> <p>Access to early stage investments in later rounds; Network of top Silicon Valley investors and companies with a focus on genomics</p> 
---	--	--	--	---	---

Source: Company data

## VALUATION

- We determine our price target for HBM Healthcare based on the asset values of the funds, private and public equities. For the funds, we carry the most recently reported fair value, as of end-2019. For public equities, we base our 12-month forward gains on the consensus price targets for the portfolio companies, taking positions as disclosed end-2019, and risk-adjusted by 38% to reflect current uncertainties. Our public equities valuation also corresponds to the pre-COVID-19 level, discounted by 11%, which we believe provides a fair view of the potential mid-term COVID-19 impact on the biotech sector.
- We see two potential scenario regarding the evolution of the COVID-19 outbreak, both resulting in a reboot of the economic activities within the next 6-8 weeks and a gradual normalization over 2H20:
  1. Successful containment of the virus outbreak due to population confinement followed by large scale vaccination. We see this scenario as rather unlikely, due to tardive health authorities' responses in Western Europe and the U.S. and the long virus incubation period (14 days).
  2. Most likely, ineffective outbreak control, health authorities' resignation followed by a forced return to economic activities, should the mortality in the active population come below 0.5%. We see this eventuality likely mitigated by the approaching summer season and vaccine advancement. On the drug therapy side, we see Regeneron VelociMab-based antibodies cocktail most able to catalyze a market recovery during summer 2020E.
- While some sectors might stay durably affected by the COVID-19 crisis, we see the biotech sector mostly impacted by the upcoming financing bottleneck, and therefore prefer companies with a strong balance sheet and cash runway into late 2021. We also expect the sector M&A activities to resume in 2H20, prompted by below-average valuations, catalyzing a sector rally thereafter.
- For private equities, we base our forecast on the estimated upside from the IPO of Cathay, which we expect might lift HBM net asset value by CHF 8-12 per share, and additional CHF 9 per share from the other private equities investments. We again point at the excellent resilience of private equities during market downturns,
- Altogether, we expect HBM net asset value per share to reach CHF 221 per share within our 12-months forecast period (including distributions). We thus initiated HBM with BUY rating.

### HBM valuation

	31-12-2019	31-03-2020E	31-03-2021E
Cash (CHF '000)	165,039	161,048	129,547
Other assets (CHF '000)	17,353	17,353	17,316
Public equities value (CHF '000)	820,687	583,174	740,631
Funds value (CHF '000)	151,462	153,405	153,405
Private equities value (CHF '000)	521,297	507,897	640,434
Long-term liabilities (CHF '000)	-99,524	-99,524	-99,524
Short-term liabilities (CHF '000)	-44,799	-16,355	-43,166
<b>Total net asset value (CHF '000)</b>	<b>1,531,515</b>	<b>1,306,999</b>	<b>1,538,643</b>
<b>Per share (CHF)</b>	<b>220</b>	<b>188</b>	<b>221</b>
<b>0% share price to NAV premium</b>			<b>221</b>

Source: Company data, Bloomberg, Baader Helvea Equity Research

Please vote for us <https://voting.institutionalinvestor.com/>

## Key data

### HBM Healthcare Investments

Switzerland

#### Other financials

Reuters: HBMN.S Bloomberg: HBMN SE

#### Buy

Price on 23-Mar-20 CHF 154.20

Target price CHF 221.00

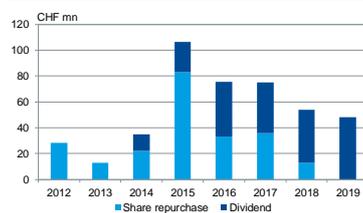
High/Low (12M) CHF 253.50/154.20

Market cap. CHF mn 1,073

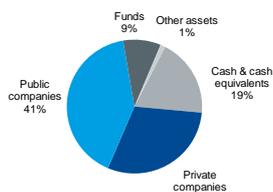
#### Company profile

HBM Healthcare Investments actively invests in the human medicine, biotechnology, medical technology and diagnostics sectors. The company holds and manages an international portfolio of companies (closed-end fund).

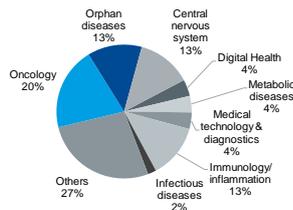
#### Redistributions



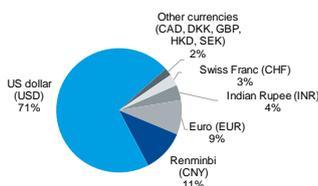
#### Allocation of assets (2020E)



#### Therapeutic class exposure (2020E)



#### FX exposure (2020E)



Source: Company data, Refinitiv Datastream, Baader Helvea Equity Research

Analyst: Bruno Bulic, Ph.D.

+41 43 388 9225

bbulic@helvea.com

FY 31 Mar.	2017/18	2018/19	2019/20E	2020/21E	2021/22E	2022/23E
<b>Share data</b>						
EPS reported (CHF)	16.55	30.05	6.07	32.58	19.47	23.36
<b>EPS adjusted (CHF)</b>	<b>16.55</b>	<b>30.05</b>	<b>6.07</b>	<b>32.58</b>	<b>19.47</b>	<b>23.36</b>
Dividend (CHF)	6.96	7.50	8.46	9.55	9.99	0.00
Book value (CHF)	165.39	189.49	188.05	212.17	222.09	235.46
Free cash flow (CHF)	8.12	7.06	8.05	8.61	9.69	10.14
Avg. no. of shares (mn)	7.0	7.0	7.0	7.0	7.0	7.0
Market cap. (avg./current; CHF mn)	864.9	1,139.8	1,072.8	1,072.8	1,072.8	1,072.8
Enterprise value (CHF mn)	960.0	1,237.0	1,170.4	1,171.7	1,173.0	1,174.3
<b>Valuation</b>						
<b>P/E adj. (x)</b>	<b>7.5</b>	<b>5.5</b>	<b>25.4</b>	<b>4.7</b>	<b>7.9</b>	<b>6.6</b>
P/BV (x)	0.7	0.9	0.8	0.7	0.7	0.7
FCF/EV (%)	4.8	4.2	4.8	5.1	5.7	6.0
FCF yield (%) (FCF/Mcap.)	6.6	4.3	5.2	5.6	6.3	6.6
Dividend yield (%)	5.6	4.6	5.5	6.2	6.5	0.0
EV/Sales (x)	-	-	-	-	-	-
EV/EBITDA adj. (x)	8.1	5.8	26.3	5.1	8.5	7.1
EV/EBIT adj. (x)	8.1	5.8	26.3	5.1	8.5	7.1
EV/CE (x)	-	-	-	-	-	-
ROCE/WACC adj. (x)	-	-	-	-	-	-
<b>Key company data</b>						
Sales growth (%)	-	-	-	-	-	-
EBITDA adj. growth (%)	-15.0	78.8	-79.0	414.5	-39.8	19.6
EBITDA adj. margin (%)	-	-	-	-	-	-
<b>EBIT adj. margin (%)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Net adj. margin (%)	-	-	-	-	-	-
Free cash flow margin (%)	-	-	-	-	-	-
Payout ratio (%)	42.0	25.0	139.5	29.3	51.3	0.0
Gearing (%) (net debt/equity)	8.2	7.4	7.5	6.7	6.5	6.2
Net debt/EBITDA (x)	0.8	0.5	2.2	0.4	0.7	0.6
Equity ratio (x) (equity/total assets)	91.9	92.7	92.6	93.4	93.7	94.0
Capital employed (CHF mn)	0.0	0.0	0.0	0.0	0.0	0.0
ROCE adj. (%)	-	-	-	-	-	-
<b>Income statement (CHF mn)</b>						
EBITDA	118.3	211.5	44.5	228.9	137.8	164.8
EBITDA adj.	118.3	211.5	44.5	228.9	137.8	164.8
EBIT	118.3	211.5	44.5	228.9	137.8	164.8
EBIT adj.	118.3	211.5	44.5	228.9	137.8	164.8
EBT	115.9	209.1	42.2	226.6	135.5	162.5
Net profit after minorities	115.9	209.1	42.2	226.6	135.5	162.5
Net profit adj.	115.9	209.1	42.2	226.6	135.5	162.5
<b>Balance sheet (CHF mn)</b>						
Non-current assets	1,254	1,417	1,406	1,575	1,645	1,740
thereof goodwill	-	-	-	-	-	-
Current assets	7	5	6	5	4	2
<b>Total assets</b>	<b>1,260</b>	<b>1,422</b>	<b>1,412</b>	<b>1,580</b>	<b>1,649</b>	<b>1,742</b>
Shareholders' equity	1,158	1,318	1,308	1,476	1,545	1,638
<b>Total equity and liabilities</b>	<b>1,260</b>	<b>1,422</b>	<b>1,412</b>	<b>1,580</b>	<b>1,649</b>	<b>1,742</b>
Net debt	95	97	98	99	100	102
<b>Cash flow (CHF mn)</b>						
Cash flow from operations	-3.1	-2.9	-4.0	-4.0	-4.0	-4.0
of which change in working capital	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow from investments	60.0	52.0	60.0	63.9	71.4	74.5
of which investment in fixed assets	0.0	0.0	0.0	0.0	0.0	0.0
<b>Free cash flow</b>	<b>56.9</b>	<b>49.1</b>	<b>56.0</b>	<b>59.9</b>	<b>67.4</b>	<b>70.5</b>
Dividends paid	-40.8	-48.7	-52.2	-58.9	-66.4	-69.5
Cash flow from financing activities	-56.4	-51.0	-54.5	-61.2	-68.7	-71.8
<b>Change in cash position</b>	<b>0.4</b>	<b>-1.8</b>	<b>1.5</b>	<b>-1.3</b>	<b>-1.3</b>	<b>-1.3</b>

## Disclaimer

### Important Notice and Disclosures pursuant to Art. 20 of the Regulation (EU) No 596/2014 of 16 April 2014 and the Commission Delegated Regulation (EU) 2016/958 of 9 March 2016 and pursuant to Art. 34, 36 and 37 of the Commission Delegated Regulation (EU) No 2017/565 of 25 April 2016

#### A. GENERAL STATEMENTS

Baader Bank AG is the parent company of Baader Helvea AG and Baader Helvea Limited. Baader Bank AG, Baader Helvea AG and Baader Helvea Limited are collectively referred to as “**Baader Helvea Group Europe Companies**” below, and each of them is referred to separately as a “**Baader Helvea Group Europe Company**”. Baader Bank AG and its subsidiaries and affiliates, including Baader Helvea AG and Baader Helvea Limited, are collectively referred to below as the “**Group Companies**” and each of them is referred to separately as a “**Group Company**”.

This “**Research Document**” was prepared by its named author, who is an employee of a Baader Helvea Group Europe Company (the “**Relevant Baader Helvea Group Europe Company**”). Responsibility for the client relationship management, the client classification as required under the applicable regulatory laws, suitability assessments and any other legal or regulatory obligations is borne solely by the legal entity that enters into a contractual relationship with the applicable client, except to the extent that applicable law or regulations require another Group Company to share the responsibility in question. This Research Document is intended for clients only of Group Companies.

The recommendations of the Relevant Baader Helvea Group Europe Company are based on information that has been diligently compiled by the Relevant Baader Helvea Group Company and is partially based on publicly available sources of third parties believed to be reliable. Neither Baader Bank AG nor any other Group Company warrants the accuracy or completeness of such information of third parties. All estimates and opinions included herein represent the independent judgment of the responsible analyst(s) named in this Research Document as of the date of publication of this Research Document. The Relevant Baader Helvea Group Europe Company reserves the right to modify the views expressed herein at any time without notice and the right not to update this information and to discontinue coverage of the company that is the subject of this Research Document without notice.

No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. To the extent legally permissible, neither the Relevant Baader Helvea Group Europe Company, any other Group Company, any of their respective authorized representatives or employees nor any other person accepts any liability whatsoever for any loss arising from any use of this Research Document or its contents or otherwise arising in connection therewith.

This Research Document (i) is for information purposes only, (ii) does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any financial instrument, money market or investment instrument or any security, (iii) is not intended as an offer for sale or subscription of or solicitation of an offer to buy or subscribe for any financial instrument, money market or investment instrument or any security and (iv) is not an advertisement thereof.

This Research Document is being distributed by electronic and ordinary mail to professional investors, who are expected to make their own investment decisions without reliance on any analysis in this Research Document. The investment opportunities discussed in this Research Document may not be suitable for certain investors, depending on their specific investment objectives, their timetable for investment or their overall financial situation, and this Research Document is not a substitute for advice from investment and tax advisors. Investors must make their own determination of the appropriateness of an investment in any instruments referred to herein based on the merits and risks involved, their own investment strategy and their legal, fiscal and financial position. As this Research Document does not constitute a direct or indirect investment recommendation, neither this Research Document nor any part of it should be construed as establishing, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever.

The investments discussed herein may fluctuate in price or value and may result in losses. Changes in rates of exchange may have an adverse effect on the value of investments. Furthermore, past performance is not indicative of future results. In particular, the risks associated with an investment in the relevant financial, money market or investment instrument or securities are not explained here in their entirety.

This Research Document has been exclusively prepared for the party who receives the Research Document from the Relevant Baader Helvea Group Europe Company or, as the case may be, their U.S. affiliate, Baader Helvea Inc., and does not establish any liability whatsoever vis-à-vis any third party. Transmission or reproduction of this Research Document without prior written consent from the Relevant Baader Helvea Group Europe Company or, as the case may be, their U.S. affiliate, Baader Helvea Inc., is not permitted, unless explicitly approved in writing by the Group Company disseminating the Research Document to the initial receiver. In the event of any approved disclosure or dissemination of the Research Document, the initial receiver is required to obtain prior confirmation from any third party to whom it discloses or transmits the Research Document that it may not rely on the Research Document in whole or in part and that no liability of any Group Company will be established vis-à-vis the third party and that it may not disclose or transmit the Research Document to any other third party.

Any party receiving the Research Document is responsible for the compliance with the laws applicable to the reception and, as applicable, the disclosure or transmission of the Research Document, particularly the requirements under Directive 2014/65/EU (MiFID II) and Regulation (EU) no. 596/2014, the regulations promulgated thereunder and the national laws implementing such laws, and none of the Group Companies may be held liable for any non-compliance with such laws.

This Research Document was completed at 04:11 PM (CET) on 24-03-2020.

Copyright © **Published by** the Relevant Baader Helvea Group Europe Company. **Disseminated by** Baader Bank AG or on its behalf by Baader Helvea Inc., Baader Helvea AG or Baader Helvea Limited.

**Germany:** Baader Bank AG is a stock corporation (*Aktiengesellschaft*) organized under the laws of the Federal Republic of Germany with its principal place of business in Munich. It is registered with the District Court (Amtsgericht) in Munich under No. HRB 121537 and supervised by the German Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht – BaFin*), Marie-Curie-Strasse 24-28, 60439 Frankfurt am Main and Graurheindorfer Strasse 108, 53117 Bonn. The value added tax identification number of Baader Bank AG is DE 114123893.

**Switzerland:** Baader Helvea AG is a corporation organized under the laws of Switzerland with its principal place of business in Zurich. It is registered with the Zurich commercial registry under No. CH-110.356.568. Baader Helvea AG is authorized and regulated as a Securities Dealer by the Swiss Financial Market Supervisory Authority (“FINMA”).

**United Kingdom:** Baader Helvea Limited is a limited company incorporated under the laws of England and Wales with its registered office at 5 Royal Exchange Buildings, London, EC3V 3NL. It is registered with Companies House under the company number 04935018. Baader Helvea Limited is authorized and regulated in the United Kingdom by the Financial Conduct Authority (“FCA”), 25 North Colonnade, London E14 5HS with the firm reference number 400056. There are no branches or related entities of Baader Helvea Limited that are also regulated by the FCA.

## B. POTENTIAL INTERESTS OR CONFLICTS OF INTERESTS

Art. 20 of the Regulation (EU) No 596/2014 of 16 April 2014 in conjunction with Articles 5 and 6 of the Commission Delegated Regulation (EU) 2016/958 of 9 March 2016 requires Baader Bank AG to disclose relationships and circumstances that may reasonably be expected to impair the objectivity of the Research Document, including interests or conflicts of interest with respect to the company that is the subject of this Research Document ("**Key Factors**"). The following Key Factors also include any interests or conflicts of interest of any person belonging to the Group Companies that are (i) known, or reasonably expected to be known, to the persons involved in the production of the Research Document; (ii) known to persons who, although not involved in the production of the Research Document, have or could reasonably be expected to have, access to the Research Document prior to its completion, or (iii) of any person closely associated with the named author of the Research Document.

Therefore, Key Factors that may apply regarding the company that is the subject of this Research Document are designated below under "Applicable Key Factors," followed by a list of all Key Factors specified by the aforementioned requirements. Please note that the list of specified Key Factors is for explanatory purposes only and that only the Key Factors designated under "Applicable Key Factor(s)" are present with respect to the company that is the subject of this Research Document.

### Applicable Key Factors

Company	Key
HBM Healthcare Investments	4, 5, 11

### Key Factors Specified by Art. 5 and 6 of the Commission Delegated Regulation (EU) No. 2016/958 of 9 March 2016

- Key 1: The Relevant Baader Helvea Group Europe Company, any other Group Company or the responsible analyst(s) named in this report own a net long or short position exceeding the threshold of 0.5% of the total issued share capital of the company that is the subject of the Research Document, calculated in accordance with Article 3 of Regulation (EU) No 236/2012 and with Chapter III and IV of Commission Delegated Regulation (EU) No 918/20127.
- Key 2: The company that is the subject of the Research Document owns 5% or more in the total issued share capital of the Relevant Baader Helvea Group Europe Company or of any of the Group Companies.
- Key 3: The Relevant Baader Helvea Group Europe Company or any other Group Company has been lead manager or co-lead manager over the previous 12 months of any publicly disclosed offer of financial instruments of the company that is the subject of the Research Document.
- Key 4: The Relevant Baader Helvea Group Europe Company or any other Group Company is a market maker or liquidity provider in the financial instruments of the company that is the subject of the Research Document.
- Key 5: The Relevant Baader Helvea Group Europe Company or any other Group Company is party to an agreement with the company that is the subject of the Research Document relating to the provision of services of investment firms set out in Sections A and B of Annex I of Directive 2014/65/EU of the European Parliament and of the Council.
- Key 6: The Relevant Baader Helvea Group Europe Company or any other Group Company is party to an agreement with the company that is the subject of the Research Document relating to the production of the Research Document.
- Key 7: Employees of the Relevant Baader Helvea Group Europe Company and/or of a Group Company (including the responsible analyst(s) named in this report or persons closely associated with them) are members of the board of directors of the company (or equivalent management and supervisory organs under applicable law) that is the subject of this Research Document. Members of the board of directors (or equivalent management and supervisory organs under applicable law) of the company that is the subject of this Research Document sit on the management board and/or supervisory board of Baader Bank AG or any other Group Company.
- Key 8: The Relevant Baader Helvea Group Europe Company or any other Group Company owns more than 1% of the capital stock in the company that is the subject of this Research Document.
- Key 9: The responsible analyst(s) named in this report or persons closely associated with them own a significant amount or at least 0.1% of the capital stock of, or otherwise has a financial interest (including options, rights, warrants, futures) in, the company that is the subject of this Research Document.
- Key 10: The responsible analyst(s) named in this report disclosed a draft of the analysis set forth in this Research Document to the company that is the subject of this Research Document for fact reviewing purposes and changes were made to this Research Document before publication.
- Key 11: The Research Document has been prepared by the Relevant Baader Helvea Group Europe Company or any other Group Company as part of a research program commissioned by a stock exchange.

In addition, the following relationships and circumstances may reasonably be expected to impair the objectivity of the Research Document, including interests or conflicts of interests, on the part of the Relevant Baader Helvea Group Europe Company or on the part of any natural or legal person working for the Relevant Baader Helvea Group Europe Company under a contract or on the part of any person belonging to the Group Companies, or on the part of any person closely associated with them:

Baader Bank AG, the Relevant Baader Helvea Group Europe Company and/or any other Group Company and/or employees or clients thereof may (i) hold significant open derivative positions in the securities of the company that is the subject of this Research Document which are not delta-neutral, or (ii) from time to time take positions in, and may purchase and/or sell the securities or related financial instruments as principal or agent, of the company that is the subject of this Research Document or of affiliates or other related parties of the company that is the subject of this Research Report.

## C. RECOMMENDATIONS, RATINGS AND EVALUATION METHODOLOGY

A list of all of our Research Documents on any financial instrument or issuer that were disseminated during the preceding 12-month period is available to our clients under [http://www.baaderbank.de/disclaimer\\_research.html](http://www.baaderbank.de/disclaimer_research.html).

### Rating categories:

The following is an explanation of the ratings, if any, included in this document.

Expected total return based on forecast dividend and 12-month price targets.

Rating	Upside/downside to the target price
Buy	>20%
Add	5%-20%
Reduce	-10% to 5%
Sell	<-10%

## HBM Healthcare Investments

Please vote for us <https://voting.institutionalinvestor.com/>

### Research ratings key:

There are four possible ratings: Buy, Add, Reduce or Sell.

### Examples of certain ratings:

**Buy:** A company that the analyst(s) named in this report deem(s) higher risk with a forecast dividend yield of 5% and price appreciation potential of 16%, generating a forecast total return of 21% over 12 months.

**Reduce:** A company with a forecast dividend yield of 7% and price appreciation potential of -5%, generating a forecast total return of +2% over 12 months.

We use three further categorizations for stocks in our coverage:

**Restricted:** A rating and/or financial forecast and/or target price is not disclosed due to compliance or other regulatory considerations such as blackout period or conflict of interest.

**Coverage in transition:** Due to changes in the research team, the disclosure of a stock's rating and/or target price and/or financial information are temporarily suspended. The stock remains in the research universe and disclosures of relevant information will be resumed in due course.

**Not rated:** Suspension of coverage.

### Valuation methodology

Company valuations are based on the following general valuation methods: Multiple-based models, peer-group comparisons, discount models, break-up value approaches, asset-based valuation methods as well as economic profit based models. Furthermore, recommendations are also based on the economic profit approach. Valuation models (including the underlying assumptions) are dependent on macroeconomic factors such as interest rates, exchange rates and raw material prices, and on assumptions about the economy. Furthermore, market sentiment affects the valuation of companies. The valuation is also based on expectations that might change rapidly and without notice, depending on developments specific to individual companies or industries. Our analysts' recommendations and target prices are derived from the models we use and might therefore change as a result of the use or development of different models. Our analysts' investment ratings generally relate to a 12-month horizon. They are, however, also subject to market conditions and can only represent a snapshot. The ratings may in fact be achieved more quickly or slowly than expected and therefore a rating may need to be revised upward or downward. Further information on the valuation methodology can be found under [http://www.baaderbank.de/valuation\\_methodology.html](http://www.baaderbank.de/valuation_methodology.html).

### Frequency of reports and updates

It is intended that each company with respect to which we issue a Research Document will be covered at least once a year, as well as in the event of important developments and/or changes in our recommendation.

### D. DECLARATION OF RESPONSIBLE ANALYST(S)

The analyst(s) named in this report certify that: (1) the views expressed in this Research Document accurately reflect their own personal views about any or all of the subject securities referred to in this Research Document, (2) no part of their compensation was, is or will be, directly or indirectly, related to the specific recommendation or views expressed in this Research Document and (3) no part of their compensation is directly tied to transactions in services of the Relevant Baader Helvea Group Europe Company's set out in Sections A and B of Annex I of Directive 2014/65/EU or other types of transactions the Relevant Baader Helvea Group Europe Company or any other Group Company performs, or to trading fees that the Relevant Baader Helvea Group Europe Company or any other Group Company performs. Such services include, *inter alia*, execution of orders on behalf of clients and on own account; portfolio management and investment advice; placing and underwriting of financial instruments; operation of multi-trading facilities or organized trading facilities and ancillary services with respect to the mentioned services.

### E. ANALYSTS' OPINIONS ONLY

This Research Document reflects the assumptions, views and analytical methods of the analyst(s) named in this report and does not constitute the investment policy of the Relevant Baader Helvea Group Europe Company or any other Group Company.

### F. ORGANIZATIONAL ARRANGEMENTS TO AVOID AND PREVENT CONFLICTS OF INTEREST

In order to proactively prevent conflicts of interest, Baader Bank AG and its Group Companies have established a compliance program. Such compliance program includes, among other things, a conflicts of interest policy and other measures to ensure compliance in particular with Article 16 (3) of Directive 2014/65/EU of 15 May 2014 and Articles 34 (3) and 37 of Commission Delegated Regulation (EU) No 2017/565 of 25 April 2016. Such measures shall ensure confidentiality and separation of information between individuals, groups and departments of Group Companies which otherwise may be exposed to conflicts of interest, particularly by virtual and physical barriers (so-called "Chinese walls"), independence of the analysts (which also include a remuneration system designed to avoid inadequate monetary incentives for analysts) as well as independence of the Research Document and recommendations themselves. The compliance program is monitored and periodically reviewed by the compliance department of Baader Bank AG and/or its Group Companies.

Furthermore, the Baader Helvea Group Europe Companies do not allow analysts and other relevant persons to engage in transactions that include financial instruments of companies on which they issue recommendations, or related financial instruments. However, analysts, like other staff, may hold financial instruments or related financial instrument in other companies that Baader Bank AG and its Group Companies cover. This is subject to strict compliance with internal rules governing own-account trading by staff members and third parties acting for the account of such staff members, including the authorization by the compliance department of Baader Bank AG and/or its Group Companies. The Baader Helvea Group Europe Companies are satisfied that their internal policy on transactions in financial instruments and related instruments does not compromise the objectivity of analysts in issuing recommendations.

The Baader Helvea Group Europe Companies and their research analysts are not aware of any actual, material conflict of interest not disclosed above at the time of distribution of this Research Document.

From time to time, sales staff may express their own personal views that depart from the research recommendation expressed in this Research Document. Both these views do not necessarily reflect the thoughts or opinions of Baader Bank AG or its Group Companies. Also sales staff's views may be based on factors, time frames and other parameters that differ from those upon which analysts base their research. Moreover, the views of our sales staff are ordinarily provided to particular clients, which may have different, specific and shorter-term investment needs and strategies.

### G. ADDITIONAL REQUIRED DISCLOSURES UNDER THE LAWS OF JURISDICTIONS SET FORTH BELOW

It cannot be excluded that Baader Bank AG or a Group Company, one of their products or any of their employees have a long or short position or deal as principal or agent in any of the securities issued by or linked to the company that is the subject of this Research Document or provide advisory or other services to it.

Opinions expressed herein may differ or be contrary to those expressed by other business areas of Baader Bank AG or of any of its Group Companies as a result of using different assumptions.

**Notice to Recipients in Australia**

This Research Document may only be distributed by the Group Companies which are authorized to provide financial services in Australia – Baader Helvea Limited and Baader Bank AG. Baader Bank AG discloses that it: (i) is exempt from the requirement to hold an Australian financial services license under the Australian Corporations Act 2001 (“Corporations Act”) in respect of financial services provided in Australia, and (ii) is regulated by Bundesanstalt für Finanzdienstleistungsaufsicht of Germany (BaFin) under German laws, which differ from Australian laws. Baader Helvea Limited discloses that it: (i) is exempt from the requirement to hold an Australian financial services license under the Corporations Act in respect of financial services provided in Australia (ii) is authorized and regulated by the Financial Conduct Authority of the United Kingdom (FCA) under UK laws which differ from Australian laws.

This Research Document is intended only for wholesale clients referred to in Section 761G of the Corporations Act who are also either professional or sophisticated investors for the purposes of Section 708(8) and (11) of the Corporations Act, and only to those persons who receive this Research Document (electronically or otherwise) in Australia (“Wholesale Clients”). Persons who are not Wholesale Clients may not act upon or rely on the information contained in this Research Document. Any investment or investment activity to which this Research Document relates is available only to Wholesale Clients and will be engaged in only with Wholesale Clients. You should speak to your legal advisor to confirm whether you are a Wholesale Client.

This Research Document has not been and will not be lodged with the Australian Securities and Investments Commission. This Research Document is not a product disclosure statement, prospectus or other disclosure document for the purposes of the Corporations Act. The information contained in this Research Document is general information only.

**Notice to Recipients in Austria**

This Research Document serves information purposes only and does not constitute investment advice nor an investment recommendation and shall not be regarded as solicitation or an offer in particular for purposes of the EU prospectus directive and the corresponding Austrian implementing statute, the Austrian Capital Markets Act (“KMG”) to purchase or sell any of the investment instruments mentioned herein. The illustrations, analyses and conclusions are of general nature only. This Research Document is directed solely to qualified investors (“qualifizierte Anleger”) within the meaning of Section 1 Paragraph 1 Subparagraph 5a KMG.

**Notice to Recipients in Canada**

This Research Document is directed to persons in Canada who are “permitted clients” of a Group Company, as such term is defined National Instrument 31-103 – Registration Requirements, Exemptions and Ongoing Registrant Obligations (“NI 31-103”). No Group Company is registered as a broker-dealer with any securities commission or similar regulatory authority in Canada, and therefore they are each restricted to activities permitted in Canada in compliance with the requirements and conditions of the international dealer exemption under NI 31-103, which include, except in limited circumstances, trading with or on behalf of “permitted clients” in foreign securities (including a security issued by an issuer formed under the laws of a foreign jurisdiction). The jurisdictions in which the head office or principal place of business of each Group Company is located are outside of Canada. All or substantially all of the assets of the Group Company are situated outside of Canada. Accordingly, there may be difficulty enforcing legal rights against the Group Company due to the foregoing.

This Research Document is not, and under no circumstances is to be construed as, a general solicitation of an offer to buy, an offer to sell or a public offering of the securities described herein in Canada or any province or territory thereof. Any offer or sale of the securities referred to in this Research Document in Canada will comply with applicable securities laws in Canada concerning the subscription, purchase, holding and resale of the securities. The company that is the subject of this Research Document may not be subject to Canadian reporting and/or other requirements under applicable securities laws in Canada. Available information regarding the company that is the subject of this Research Document may be limited, and that company may not be subject to the same auditing and reporting standards as reporting issuers in Canada.

Under no circumstances is the information contained in this Research Document to be construed as investment advice in any province or territory of Canada, and such information is not tailored to the needs of the recipient. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence.

**Notice to Recipients in Guernsey**

None of the Group Companies are licensed by the Guernsey Financial Services Commission (“GFSC”) under the Protection of Investors (Bailiwick of Guernsey) Law, 1987, as amended (the “POI Law”) to carry on controlled investment business in Guernsey. This Research Document is not being, and may not be, circulated or made available to, or directed at, any person in the Bailiwick of Guernsey to the extent that doing so constitutes carrying out a restricted activity (including promotion, subscription, registration, dealing, management, administration, advising or custody) in, or from within, the Bailiwick of Guernsey.

**Notice to Recipients in Israel**

This Research Document is directed only to “Qualified Clients” in Israel, as such term is defined in the Regulation of Investment Advice, Investment Marketing and Investment Portfolio Management Law, 1995 (the “Law”). None of the Group Companies holds a license under the Law, or the insurance required of licensed Investment Advisers under the Law. The “Potential Conflicts of Interests” section of this disclaimer includes a list of the categories of securities and financial assets/instruments with respect to which the Group Companies may have linkage or that are deemed to be preferred by the Group Companies.

**Notice to Recipients in Japan**

None of the Group Companies is registered as a Financial Instruments Business Operator under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended, the “FIEA”). This Research Document may be distributed only to certain professional investors who are the addressees of our email pursuant to an exemption from the registration requirements of, and otherwise in compliance with the FIEA and other relevant laws and regulations of Japan.

**Notice to Recipients in Jersey**

None of the Group Companies are licensed by the Jersey Financial Services Commission under the Financial Services (Jersey) Law 1998, as amended (the “FSJL”) to carry on financial service business in Jersey. To the extent this Research Document contains investment advice for the purposes of the FSJL, the Group Companies are relying on the Financial Services (Investment Business (Overseas Persons – Exemption)) (Jersey) Order 2001.

**Notice to Recipients in the Principality of Monaco**

This Research Document may only be offered or distributed, directly or indirectly, to Monaco banks duly licensed by the French “Autorité de Contrôle Prudentiel et de Résolution” and fully licensed financial service provider companies regulated by the “Commission de Contrôle des Activités Financières”. The Recipients declare being perfectly fluent in English and expressly waive the possibility of a French translation of this Research Document: *Les destinataires du présent document reconnaissent être à même d'en prendre connaissance en langue anglaise et renoncent expressément à une traduction française.*

#### Notice to Recipients in New Zealand

This Research Document may only be distributed by Baader Helvea Limited and Baader Bank AG to wholesale clients as defined in section 5C (Wholesale Clients) of the Financial Advisers Act 2008 (NZ) (FAA). Both Baader Helvea Limited and Baader Bank AG can (i) provide financial adviser services to Wholesale Clients as exempt providers, and (ii) provide broking services under the FAA to persons who are Wholesale Clients and, to the extent that the broking services comprise custodial services as defined in the FAA, are also persons falling within the categories set out in clause 11 of the Financial Advisers (Custodians of FMCA Financial Products) Regulations 2014. Persons who are not Wholesale Clients (as referred to in the FAA) may not act upon or rely on the information contained in this Research Document. Any investment or investment activity to which this Research Document relates is available only to Wholesale Clients and will be engaged in only with Wholesale Clients. You should speak to your legal advisor to confirm whether you are a Wholesale Client.

Baader Bank AG discloses that it is regulated by Bundesanstalt für Finanzdienstleistungsaufsicht of Germany (BaFin) under German laws, which differ from New Zealand laws. Baader Helvea Limited discloses that it is authorized and regulated by the Financial Conduct Authority of the United Kingdom (FCA) under UK laws which differ from New Zealand laws. Neither Baader Helvea Limited nor Baader Bank AG are required to be registered under the Financial Service Providers (Registration and Dispute Resolution) Act 2008 (NZ) (FSPR) due to the territorial scope of the FSPR.

This Research Document has not been and will not be lodged with the New Zealand Registrar of Financial Service Providers. This Research Document is not a product disclosure statement for the purposes of the Financial Markets Conduct Act 2013 (NZ) nor an investment statement or prospectus for the purposes of the Securities Act 1978 (NZ). The information contained in this Research Document is general information only.

#### Notice to Recipients in South Africa

Baader Helvea Limited is exempted from the provisions of the Financial Advisory and Intermediary Services Act, 2002 (FAIS) and is not a registered financial services provider in terms of FAIS. Baader Helvea Limited will provide clients with confirmation of the exemption on request.

#### Notice to Recipients in Switzerland

This document has been prepared without regard to the disclosure standards for prospectuses under art 652a or art 1156 of the Swiss Federal Code of Obligations ("CO"), the Swiss Federal Act on Collective Investment Schemes ("CISA") or the disclosure rules of any stock exchange or regulated trading facility in Switzerland, and does neither constitute a prospectus under such laws, nor a similar communication within the meaning of art 752 CO, nor a simplified prospectus under the CISA.

#### Notice to Recipients in Taiwan

None of the Group Companies is licensed by the Financial Supervisory Commission ("FSC") of Taiwan to conduct the securities advisory or consulting business in Taiwan. The distribution of this Research Document from the jurisdiction outside of Taiwan has not been registered with or approved by the FSC. Neither this Research Document nor the information contained in it is an offer or is intended to be an offer to make with any person, or to induce or attempt to induce any person to enter into or to offer (or intent to offer) to enter into any agreement for or with a view to acquiring, disposing of, subscribing for or underwriting securities.

#### Notice to Recipients in the United Kingdom

This communication is directed to persons in the United Kingdom who (i) are reasonably believed to be such persons as are described in Article 19 ("investment professionals") or Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations, etc.") of the United Kingdom Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or (ii) are persons to whom it may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). Persons who are not relevant persons may not act upon or rely on the information contained in this communication. Any investment or investment activity to which this communication relates is available only to relevant persons and will be engaged in only with relevant persons.

#### Notice to Recipients in the United States

This Research Document has been prepared outside the United States by a Baader Helvea Group Europe Company (the "Preparing Group Company"). Neither the Preparing Group Company nor any other Baader Helvea Group Europe Company is registered with the U.S. Securities and Exchange Commission as a broker-dealer in the United States or a member of the Financial Institutions Regulatory Authority ("FINRA"). Baader Helvea Inc. (a Group Company that is a registered U.S. broker-dealer and a member of FINRA) did not contribute to the preparation of this Research Document. This Research Document has been prepared and reviewed by research analysts employed by the Preparing Group Company, who are not associated persons or employees of Baader Helvea Inc., are not registered or qualified as research analysts with FINRA, and are not subject to FINRA rules.

This Research Document may be distributed in the United States only:

1. by a Baader Helvea Group Europe Company to "major US institutional investors" (as defined in, and pursuant to the exemption provided by, Rule 15a-6 under the U.S. Securities Exchange Act of 1934. Neither any Baader Helvea Group Europe Company nor any major US institutional investor receiving this Research Document may distribute it to any other person in the United States; or
2. as affiliate research by Baader Helvea Inc. When distributing this Research Document in the United States as affiliate research, Baader Helvea Inc. accepts responsibility under applicable U.S. laws and regulations (including FINRA Rule 2711) for its content. Additional information on this report is available upon request from Baader Helvea Inc.

Regardless of whether this Research Document is distributed by a Baader Helvea Group Europe Company or by Baader Helvea Inc., orders utilizing the services of the Group Companies for the purchase or sale of the securities that are the subject of this Research Document may be given only to Baader Helvea Inc.

#### Other Jurisdictions

The distribution of this Research Document in any other jurisdiction may be restricted by law, and persons into whose possession this Research Document comes should inform themselves about, and observe, any such restrictions. This Research Document is not directed to, or intended for distribution to or use by, any person or entity that is a citizen or resident of, or located in, any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.

For additional important legal information, please visit the following link: [http://www.baaderbank.de/disclaimer\\_research.html](http://www.baaderbank.de/disclaimer_research.html).

**HBM Healthcare Investments** Please vote for us <https://voting.institutionalinvestor.com/>

## Contacts

### Markus Mayer

Head of Research  
+49 89 5150 1818  
markus.mayer@baaderbank.de

## EQUITY RESEARCH

### Capital Goods

Capital Goods (Switzerland)	Jorg Schirmacher, CFA	+41 43 388 9267	jschirmacher@helvea.com
Capital Goods (Switzerland)	Rolf Renders	+41 43 388 9213	rrenders@helvea.com
Capital Goods	Christian Obst, CEFA	+49 89 5150 1805	christian.obst@baaderbank.de
Capital Goods (Germany)	Peter Rothenaicher	+49 89 5150 1817	peter.rothenaicher@baaderbank.de

### Chemicals

Markus Mayer	+49 89 5150 1818	markus.mayer@baaderbank.de
Laura López Pineda	+49 89 5150 1804	laura.lopez-pineda@baaderbank.de

### Consumer

Consumer Durables / Food Retail / Non Food Retail Food & Beverages	Volker Bosse, CEFA Co-Head Equity Research Andreas von Arx Head of Swiss Equity Research	+49 89 5150 1815  +41 43 388 9257	volker.bosse@baaderbank.de  avonarx@helvea.com
--	---	---	--

### Financial Services

Tim Dawson	+41 43 388 9232	tdawson@helvea.com
Andreas von Arx	+41 43 388 9257	avonarx@helvea.com

### Metals & Mining

Christian Obst, CEFA	+49 89 5150 1805	christian.obst@baaderbank.de
----------------------	------------------	------------------------------

### Pharma

Bruno Bulic, Ph.D.	+41 43 388 9225	bbulic@helvea.com
Laura López Pineda	+49 89 5150 1804	laura.lopez-pineda@baaderbank.de

### Real Estate

Andre Remke, CFA Co-Head Equity Research	+49 89 5150 1816	andre.remke@baaderbank.de
Stephanie Ruhmannseder	+49 89 5150 1811	stephanie.ruhmannseder@baaderbank.de

### Technology

Software / IT Services / Support Services	Knut Woller, CEFA	+49 89 5150 1807	knut.woller@baaderbank.de
---	-------------------	------------------	---------------------------

### Transport

Christian Obst, CEFA	+49 89 5150 1805	christian.obst@baaderbank.de
----------------------	------------------	------------------------------

## EQUITY STRATEGY

Gerhard Schwarz, CEFA Head of Equity Strategy	+49 89 5150 1812	gerhard.schwarz@baaderbank.de
--	------------------	-------------------------------

## EQUITY SALES

Frankfurt	+49 69 1388 1357
London	+44 20 7054 7100
Munich	+49 89 5150 1850
Zurich	+41 43 388 9200

## DERIVATIVES SALES

Munich	+49 89 5150 1990
--------	------------------

## EQUITY SALES TRADING

Frankfurt	+49 69 1388 1355
London	+44 20 7054 7100
Munich	+49 89 5150 1870
New York	+1 212 935 5150
Zurich	+41 43 388 9200

### For North American clients:

New York	+1 212 935 5150
----------	-----------------

## PUBLICATION ADDRESSES

**Baader Bank AG**  
**Equity Research**  
Weihenstephaner Strasse 4  
85716 Unterschleissheim, Germany

T +49 89 5150 1810

**Baader Helvea AG**  
**Equity Research**  
Talstrasse 9  
8001 Zurich, Switzerland

T +41 43 388 9250